RAILWAY AGE

Who Will Save the Railroads?

If the railroad industry is saved from general bankruptcy, from destruction in large measure as an agency for giving employment and making purchases, and from final government ownership, it will be saved by the exertions of those who are conscious of having selfish reasons for exerting themselves to help save it. It will not be saved by the exertions, for example, of politicians, unless they are made conscious that they have a selfish reason for putting forth such exertions. On every hand for months criticism of politicians and government office holders has raged upon the ground that they have been putting their selfish desire to hold or get jobs before the welfare of the nation. Is there anybody else who, either during the late period of prosperity or the recent period of depression, has been putting the public welfare before his own selfish interests? Perhaps a very few generous and patriotic souls here and there have been doing so; but a vast majority have been merely trying to get or save all they could at the cost of everybody else.

A politician is a man to whom politics is merely a profession or business that he uses as a means of making a living or even getting rich, and like almost everybody else, he says and does those things that he believes will best serve his own interests in his profession or business as a politician. If the railroad industry is to be saved from government ownership, if it is to be saved from general bankruptcy and rehabilitated as a means of rendering good transportation service and of giving a large amount of employment and making large purchases, the assistance of politicians in accomplishing this result will be needed. It is essential, however, if their assistance is to be secured, for those who desire and need their assistance squarely to face the fact that it will be secured only if and when they shall be convinced that it is to their selfish interest to give it.

Effects of Depression on Railways

Comparing the statistics of the railways for the early months of 1932 with those for the early months of 1929, we find that railway employment, wages, traffic, earnings, purchases, etc., have declined as follows during the depression: Number of employees, 32.5 per cent; total wages paid, 41 per cent, operating expenses, 42 per cent; passenger business, 41 per cent; freight traffic, 50 per cent; total earnings, 46.5 per cent; net operating income, 78 per cent; locomotives placed in service, 66 per cent; freight cars placed in service, 90 per cent; average price of railway stocks (July 9, 1932, compared with July 9, 1929), 92 per cent. If these figures do not indicate a need for salvation of the railroad industry and its employees, and of the railway equipment and supply manufacturing industry and its employees, then we do not know what figures would be required to demonstrate a need for their salvation.

The thing most essential to saving and rehabilitating the railroad industry is a large increase in the traffic handled by it. The larger the increase in traffic may be, the less will be the need for permanently effecting retrenchments. The less the increase in traffic may be, the greater will be the need for not only effecting economies due to increased efficiency, but also for effecting retrenchments which will include drastic reductions of wages, the destruction of a large amount of railway property, and the destruction of railway securities and of employment which would necessarily result. What classes have those selfish interests which should cause them to take an intelligent and active interest in preventing the bankruptcy of the railroads and bringing about their rehabilitation?

Who Should Help?

1. Public men and government officials. General railroad bankruptcy, by its destruction of the value of railroad securities owned by life insurance companies, savings banks and financial institutions, would make the general credit situation worse than it is, and protract the depression. Those responsible for the conduct of public affairs might be held responsible and thereby be injured in their profession or business as politicians. What are they doing to save the railroads? Through the Reconstruction Finance Corporation, and with the approval of the Interstate Commerce Commission, the federal government is making large loans to the railroad companies. No other efforts are being made by men in public life or public office to solve the railroad problem. The platform of the Republican party declares for equal government

treatment of the railways and other carriers. It emphasizes that "the restoration of their credit and the maintenance of their ability to render adequate service are of paramount importance to the public, their many thousands of employees" and the institutions that own their bonds; but it says nothing about any changes in the regulation of the railways themselves which may be necessary to accomplish these results. The platform of the Democratic party completely ignores the railroad problem.

2. Owners of railway securities. With the average price of railway stocks 92 per cent less than it was three years ago, and the prices of railway bonds the lowest in history, the millions of owners of railway securities, and the financiers who have participated in issuing them and received large commissions for marketing them, are, like the Interstate Commerce Commission, which has authorized the issuance of a large part of them, sitting on the sidelines watching the processions of railways go by apparently on the road to ruin, and doing virtually nothing to arrest the procession.

Railway Executives and Employees

3. Railway executives. The fact that the great problems of the railways are the problems of the *railroad industry,* and not the problems of individual railways, and that railway executives should in cooperation put forth their greatest efforts to solve these problems of the industry, has been emphasized with tireless iteration and reiteration; but until recently it has been impossible to get railway executives to divert from the problems of the individual railroads the time, thought and energy required to solve the problems of the industry. This is perhaps the principal reason why the industry is in its present condition. At last the executives are working upon plans to stop destructive competition between the railways themselves, to reduce the destructive regulation of the Interstate Commerce Commission, and to reduce the destructive competition of government subsidized and unregulated carriers by waterway and highway.

4. Railway employees. The 1,650,000 employees who were on the pay roll of the railroads three years ago, and the number of whom has now been reduced to less than 1,100,000, have a more vital interest in the future of the railroads than any other class. One-third of them are now unemployed. Most of them belong to national labor organizations. Those who are still employed will have to have their present wages drastically reduced, and those that are not now employed cannot hope ever to be employed by the railways again, unless traffic is restored to the rails and the railways get fair regulation from the Interstate Commerce Commission and as good treatment by the national and state governments as is given to competing carriers by highway and water. For at least a quarter century leaders of railway labor organizations and most railway employees have been giving their moral and political support to politicians who have favored the government policies that are so largely responsible for the present condition of the railroad industry upon the apparent theory that the greater the injury done to the railroad industry the greater would be the benefits conferred upon those employed by that industry.

How About Railway Labor Leaders?

What are they doing now to help solve the railroad problem? All over the country employees of intelligence are taking the lead in organizing citizens' and taxpayers' associations for the purpose of securing equality of government treatment of railways and competing carriers. The railway labor organizations have adopted resolutions advocating such equality of treatment. Thus far, however, these resolutions have been a mere gesture. Nothing has been done to give any effect to them. For the most part railway labor leaders are continuing their antediluvian policy, which is completely discredited by present conditions in the railroad industry, of proceeding upon the assumption that the best way for them to help the members of their organizations is to attack capital, and especially the capital invested in the railroad industry. They are seeking the establishment of a six-hour day at a time when it should be plain to every sane man that its inevitable effect would be irretrievably to bankrupt the railroad industry and forever destroy its ability to increase employment. Their weekly political organ, "Labor", is giving practically no support to those who are trying to increase railway employment by getting traffic back on the rails and, at the same time is giving aid, comfort and support to every public man and every piece of proposed legislation that would help to complete the ruin of business, bankrupt the railroads and drive them into government ownership.

5. Railway equipment and supply manufacturers. Because of the terrific decline in railway purchases, no other branch of business is suffering worse than the railway equipment and supply manufacturing industry. Every ton of freight diverted from the railways to the highways means an increase of the market for trucks and a reduction of the market for railway equipment and supplies. The Railway Business Association recently has been reorganized under the presidency of Harry A. Wheeler, formerly president of the Chamber of Commerce of the United States. It should spare no effort to stimulate manufacturers in every part of the country, and through them their employees, to the greatest activity to get fair treatment for the railways and to get traffic back on the rails.

Is No Leadership Possible?

These are a few of the interests that should organize and co-ordinate their organizations to fight to save the railroads. They have at least one common concern, and that the most important of all—the concern of getting traffic back on the railways. The *Railway Age* has said in the past that railway labor leaders should take the lead in co-ordinating their ac-

tivities because then such co-ordination could not be called a "Wall Street movement", and they represent a political power which nobody dares disregard. The labor leaders have, as yet, shown no disposition to take this leadership. They are still playing the old army game of labor politics. They are still playing the old game of radicalism, which has never restored, but always has destroyed, prosperity in every country in which it has been successful.

Are the labor leaders, while considering themselves "progressives", merely reactionaries, who, like the Bourbon kings of France, can never learn anything or forget anything? If so, are there not men somewhere among railway executives, railway financiers, manufacturers or public men who will assume the risks and labors of leadership? "Where there is no vision the people perish." Is there nowhere enough vision and capacity for leadership to bring about the needed organized and effective activity of all those having directly and indirectly a direct and plain selfish interest in the solution of the railroad problem?

The Container Situation

A few years ago the freight container was hailed as a sovereign remedy for the competitive ills of the railways. It was adopted and aggressively promoted by several railways with results which were said to have been rather satisfactory. The prospects for the wide adoption of the container system of transportation by the railways looked bright. Suddenly progress along this line stopped. Some roads which had been using containers abandoned them. Others which had considered their adoption dismissed the idea. Two or three continued to use containers with varying results.

The reason for the change in the container situation was the decision of the Interstate Commerce Commission to the effect that the container rates in effect were too low. The decision was dated April 14, 1931, and it allowed the railways until July 20 of that year to establish new rates on the net weight of the container, these to be no lower than the contemporaneous third-class rates. The new tariffs were duly filed and approved, and they contained the further restriction that the container rate should in no event be less than the contemporaneous carload rate on the highest rated commodity loaded in the container, nor lower than the rate on the next class lower than the any-quantity rate on any commodity loaded in the container which is accorded an any-commodity rating in the governing classification. Container transportation may be said to have gone into a severe decline from the effective date of the new tariffs.

Now an effort is being made to revive the freight container. The New York Central, a leader in the development of container transportation, has applied to the commission for modification of the order issued last year, and has asked for authority to establish a revised and reduced schedule of rates on an all-commodity basis, designed to meet motor truck competition on its lines east of Buffalo. This makes container rates an active issue again, and the application may be a forerunner of a return of general interest in the possibilities of the freight container.

What the freight container can do for the railways is a matter upon which widely differing opinions are held. Many railway officers condemn it on the ground that it is suitable for use only by a relatively small portion of the shippers of l.c.l. freight. These officers point to the fact that the container service has been largely used by forwarding companies—which may or may not be in itself an indictment of the container. On the other hand, it is admitted that the container does offer numerous advantages as a medium of transportation from an operating standpoint. It offers an economical means of handling much l.c.l. freight—economy to the railway in handling expense, in reducing loss and damage claims and in increasing the load in freight cars; and economy to shippers through savings in packing costs, expedition in service, etc.

The container offers possibilities which should not be discarded on account of even substantial obstacles in the way of their development. The container can effect an improvement in railway transportation; therefore, in one way or another, it should be used. The one consideration which has held it back is the matter of rates. All that is needed to bring the freight container into its full and proper use is a system of rates which will be remunerative from the railways' standpoint, attractive from the shippers' standpoint and fair to everybody. Possibly this is a pretty large order, but the end justifies whatever means are necessary to accomplish it. It is to be hoped that out of the New York Central's application will come a basis of container rates which will meet all of the requirements of railways and shippers alike.

Taking the Hazard Out of the Tie Business

In 1927 the railways purchased 97,135,000 crossties. In 1929 they purchased 79,336,000. In 1931 their purchases were only about 60 per cent of those for 1929, while in the first four months of this year the roads bought less than 40 per cent as many as in the corresponding months of last year. In other words, the railways are now buying only about 20 per cent as many crossties as they bought as recently as five years ago. These figures indicate not only the extent to which the roads are drawing on the "fat" which they put into their properties in previous years, but also the magnitude of the fluctuations that confront those who are engaged in the production of ties for railway use.

It is said with reason in not a few industries selling to the railways that they face alternate periods of "feast and famine." This is especially true in the crosstie industry for two reasons. In the first place, there is normally a sufficiently large factor of safety in track construction to permit crosstie renewals to be curtailed for a considerable period without creating a serious hazard, a fact which railway managements recognize and take advantage of when confronted with the necessity for curtailing expenses. Secondly, it requires from 6 months to 18 months, depending on the locality and the timber, to produce, season and treat a tie ready for use and still longer if it is necessary for a producer to build up a woods organization to stimulate production. The extended period that is thus required for the production of quality ties is frequently overlooked until a pressing need develops, when all too frequently a road waives quality, sacrifices seasoning and runs prices up to secure delivery, all of which measures demoralize the market for producers and other roads alike.

One cause for this situation is the lack of reliable statistics of stocks in the yards of the producers and the railways. Without such information a producer must work in the dark when setting up a production program, making the best guess possible, but a guess nevertheless, on the extent of the demand that will prevail when his ties are ready for delivery. He is just as much in the dark as to the stocks in the hands of his competitors and his customers. Railway purchasing officers are equally uncertain whether they can safely rely on adequate supplies being forthcoming from the producers when they are called upon to protect their future requirements. This situation is detrimental to both producer and purchaser, subjecting both to losses arising from these alternate periods of large surpluses and acute shortages.

To correct this difficulty, the Railway Tie Association is endeavoring to set up a neutral agency which can collect from the producers and the railways figures as to the stocks on hand, for prompt assembly into one composite index for dissemination among interested parties in the same way that figures are now made available regarding stocks of lumber, cement and other important commodities. Such figures would eliminate much of the uncertainty from producing and buying practices and benefit buyer and seller alike. They would remove much of the hazard, reduce the margin of profit necessary and eliminate much of the waste in timber that now results from overproduction.

For these and other reasons, such a plan holds much of promise to the railways. As the sole outlet for the product of the tie producers, the railways have of necessity to make good, over a period of time, any losses incurred by the producers. To the extent that these losses can be reduced, therefore, the railways will profit. For this reason, they have a very direct incentive to co-operate in the collection of figures on tie stocks, if and when the plan is launched.

Freedom Good for All Except the Railroads

When other transport agencies, advantaged by present unequal competitive conditions, divert traffic from the railroads, the suggestion that regulation be equalized and that payment for the use of public facilities be adequate is usually met with some pious expression of regard for the "public" and its need for the "cheaper" and "more flexible" forms of transportation. If on the other hand competition from the railways happens to affect other interests an immediate cry is raised for a tightening of regulation and the imposition of additional restrictions on the railroads.

This characteristic attitude is reflected in the recent testimony of witnesses for the Warehousemen's Protective Association at hearings in connection with the Interstate Commerce Commission's investigation of warehousing and storage of property by carriers at the port of New York. Rates of railway-affiliated warehouses and for storage on railroad piers should, of course, be reasonably compensatory—they should not become devices for the granting of rebates nor should railroad resources be dissipated in this or any other way in a mad scramble among the carriers for the available tonnage. If it be shown on the complete record that such a scramble has reduced railway facilities for providing storage and other accessorial services to mere pawns in the hands of the traffic departments, the situation should be corrected. Competition should be fair.

But the witnesses for the Warehousemen's Protective Association will not be satisfied if the railroads are required to charge compensatory rates for storage services; they want the carriers excluded entirely from the warehousing and storage business. Each of these witnesses in turn told representatives of the I. C. C. that he would consider inadequate an order requiring the railroads to charge "standard" rates for storage. The railroads, they contended, should stick to transportation and leave the warehousing business to those specializing in such services.

Do warehouses stick to warehousing? They do not. Many of them, especially among merchandise warehouses, operate fleets of motor trucks, acquired originally, no doubt, for making local deliveries. Gradually, however, the cruising radii of these fleets have been extended until they have become formidable competitors of the railroads. Thus, if long-distance highway transportation, offered, because of subsidies, at less than its total cost, has become a proper adjunct to the warehouse business, it is difficult to regard warehouse services at compensatory rates as improper functions of the railways. The railways in justice must be permitted to meet competition as they find it. They cannot, like Mr. Micawber, continue "waiting for something to turn up."

Railways and Economic Recovery*

Governmental violation of economic law in restricting railways and aiding competitors must be ended if the railroads and business generally are to be revived

By Samuel O. Dunn

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THE protracted and profound depression through which we have been passing, and in the depths of which we are still mired, has not been due to any single cause, or even a few causes, although many would have us believe that this is the case. As it was the fashion some three or more years ago for special pleaders to attribute our largely illusory prosperity to one or a few causes to which they wanted people to believe it was due, it is now the fashion for special pleaders to find remedies for existing conditions in measures which they have some special reason for wanting adopted. As five years ago the defenders of prohibition had discovered in it the cause of our prosperity, so now the opponents of prohibition find in its abolition the sovereign means of economic recovery. As formerly the spokesmen of the automobile industry found in its great expansion the reason for our affluence, so now some find in the vast increase of our expenditures for highway transportation a principal cause of our economic debacle, while others regard still greater expenditures upon highways and motor transportation as the principal means by which we may tax and spend ourselves rich. During the period when creditors apparently were losing because of the declining value of the dollar and fixed obligations as compared with the value of property and incomes in general, nobody arose to declare that our currency and credit should be deflated to protect the owners of bonds and mortgages and other creditors. Now, when the value of the dollar and of fixed obligations have increased as compared with the value of property and incomes in general, we hear numerous proposals emanating from high and authoritative sources for the inflation of currency and credit to reduce the burdens of debtors, increase prices and thereby make everything right.

Disregard of Economic Law

The developments within recent years illustrate not only the anarchy that has prevailed in our government and business affairs, but also, the anarchy that prevails in our economic thinking. I read a few days ago a criticism by a very eminent public man of those who deprecate the use of artificial means to bring about economic recovery and in the main favor letting nature take its course. Not long ago a member of my family was attacked by one of the most deadly maladies ever known to the medical profession. The numerous physicians who successfully performed their parts in saving the patient's life said repeatedly that all they could do was to help nature until its healing powers effected a cure. In the long history of the medical profession for every patient that it has lost by giving nature a chance it has killed thousands by substituting quack nostrums and methods for the curative powers of nature. The medical profession now understands the laws of nature with which it must co-operate much better than economists, public men and business men understand the laws of economics which they cannot disregard without peril to us all.

But there *are* natural laws of economics, and it is our disregard of them which causes such inflation and largely artificial prosperity as that through which we passed in the period ending with 1929, and such very real depression and distress as that through which we are passing now. As the entire American people, including not only our leaders in Wall Street and on Pennsylvania Avenue, but also our business men on Main Street, and our working men and farmers, have brought this condition upon themselves by committing, in their short-sighted greed, every economic folly that an entire people could commit, so now they will have to use some fairness and sanity, as well as do a great deal of hard work, to remedy the condition. Our greatest danger is that we will continue to delay economic recovery, as we already have, by resorting to nostrums instead of giving nature a chance.

The subject that I have come here to discuss is "The Railroads and Economic Recovery." I have a special and selfish interest in the welfare of the railroad industry. I am regarded by many as a special pleader for it. Probably I am. I am not going to say to you, however, that the restoration of prosperity to the railroads is the sovereign way to restore prosperity to the country. The prosperity of the railroads cannot be restored without the restoration of general prosperity because the great essential to a restoration of their prosperity is a large increase in their traffic, and no such increase can be caused by any means excepting a revival of general business. The government could go on giving them oxygen in the form of loans until it exhausted its loaning capacity and it would do them no good unless it helped thereby to cause an improvement in general credit conditions that would cause an improvement in general business. Two propositions regarding the railroad industry, however, I intend to state and undertake to demonstrate.

Transport Policy Principal Cause of Depression

The first is, that the policies of our state and national governments in dealing with transportation have been among the principal causes of this depression and of its deepening and prolongation. The second is, that if they continue to follow these same policies, the conditions of the railroad industry will seriously delay economic recovery, and finally make unavoidable government ownership of railways.

The railways are suffering with other industries from the effects of the depression; but they are suffering

* An address delivered before the Institute of Public Affairs, University of Virginia, on July 8, 1932.

much worse than any other large industry. The lowest average price of industrial stocks reported by Dow Jones & Company during the depression in 1921 was 63.90, and the lowest average price of railway stocks, 65.52. On June 27, 1932, the average reported for industrial stocks was 42.93, or 34 per cent less than the lowest of 1921, while the average reported for railroad stocks was 13.76, or 80 per cent less than the lowest of 1921. If we go back to 1897, when the prices of railway stocks reached the lowest level ever reported before the present depression, we find that the average price of industrial stocks is still actually somewhat higher now than the lowest point reached then, while the average price of railroad stocks is 71 per cent lower than the lowest point reached then. The decline in the prices of railway bonds has been comparatively as great as the decline in the prices of railway stocks.

R.F.C. Loans to Save Bank Deposits and Insurance Policies

Billions of dollars of bonds and other railway securities are owned by life insurance companies, savings banks, and other fiduciary institutions, and in consequence we see the government, through the Reconstruction Finance Corporation, volunteering to loan the railway companies hundreds of millions of dollars to save them from insolvency, not for the benefit of the railways themselves, but to prevent heavy losses to holders of life insurance policies and depositors in savings banks and a complete degeneration of national credit.

Whether this government policy of loaning the railways large amounts of money is wise always has seemed to me doubtful, and its expediency will have to be measured by its final results. It is a policy that never was adopted before, excepting in 1920 to tide over their return to private operation, and its purpose has been, as I have said, not to help the railroads, but to improve an extremely bad general credit situation, as a means of starting a revival of general business.

But let us consider the matter from some other points of view. Many railroad companies have gone into bankruptcy in the past, and probably there never was a railroad receiver appointed who did not begin immediately to employ more men and buy more equipment and materials than the management had been buying and employing before. The reason is, that while a railway company is drifting toward bankruptcy, the management makes every possible retrenchment in order to earn the interest on its bonds, while after it has actually become bankrupt the receiver usually begins to spend for labor and materials the money that otherwise would be paid out as interest.

Are R.F.C. Loans Retarding Recovery?

What this country needs is more employment and more buying to enable it to earn the interest on its debts, and I am by no means sure that the loans being made to the railways are not retarding rather than expediting business recovery. By accepting loans the railroads are accumulating an increase in their indebtedness which will be a drain upon their earnings when business recovers, and those loans are being made by the government.

If they should prove unable to make repayment, the loans would afford an argument for and pave the road to government ownership, a policy which few want, but which may become unavoidable. Consequently, the government's policy of making loans to the railroads is not only of doubtful expediency measured by its immediate results, but dangerous because of its tendency to advance government ownership.

Of course, I am hazarding the view that receiverships might be preferable, under present conditions, to their postponement or prevention by government loans, not because receiverships are desirable, but because as compared with their postponement or prevention by government loans, they may be the lesser of two evils. If railroad receiverships resulted in larger expenditures for labor, equipment and materials, they would, of course, necessitate postponement of payment, or even non-payment, of interest upon, or even the principal of, bonds. If, however, this depression continues much longer creditors, including the creditors of railroads, will have to take their share of losses along with debtors, and the great essential to curtailing the losses of all is to end the depression by increasing buying and the employment of labor.

Government Delaying Necessary Readjustments

In my opinion the present apparent or real need for government action on an unprecedented scale to relieve the unemployed and restore credit has been largely created by government efforts ever since late in 1929 to prevent economic readjustments that could not be prevented. The railroads should have been saved from bankruptcy by reductions of their wages and other expenditures, and not by government loans, and the time to have begun saving them was two years ago when, on the contrary, on the urging of the government, they were maintaining wages and actually increasing their capital expenditures. If there is any industry in this country which, because of past government interference with its affairs and management, is now entitled to be aided by government loans, it is the railroad industry. But what the government should have done was to have let the managements of the railways, without interference, adopt the measures necessary to save them from bankruptcy, and not merely have begun to try to save them by government loans after they were virtually bankrupt.

The railroads have been reduced during this depression to a financial condition so much worse than that of other industries because they have been subjected to adverse influences additional to those that have affected other industries. There are spokesmen of some other industries, the managements of which are free from government interference, who assert that one of the causes of the present situation of the railways is that they have not been well managed. Well, there have been plenty of mistakes made in the management of all industries, including the railroads, but I maintain that no other industry can show a better record in the decade from 1920 to 1930 in increasing the efficiency and economy of its operation, in improving its service and of conservatism in its financing than the railroad industry.

Railway Efficiency Increase a Record

The railways paid a slightly higher average wage per hour in 1930 than in 1920, but meantime reduced their annual payroll $1,165,000,000 and their annual total operating expenses $2,000,000,000, or 30 per cent. The average speed of freight trains was increased 34 per cent, and average tons moved one mile per freight train hour was increased 48 per cent. The number of pounds of fuel consumed per one thousand gross ton miles in freight service was reduced 30 per cent. Loss and damage of freight was reduced 71 per cent. The number of passengers carried for each one accidentally killed was increased from 5,500,000 to 11,600,000. The number of men employed for each employee accidentally killed was increased from 805 to 1,553. The increase

in the investment in railroad properties exceeded six billion dollars, while the increase in outstanding capitalization was less than $2,100,000,000. What other industry can show an equal record of conservatism in financing?—and yet it is the railroads that are in the most serious financial condition.

The railroads, after having, during the previous decade, made a record which demonstrates good management, have been reduced to their present condition during this depression because they have been deprived by the American people, through their state and national governments, of the fruits of good management. I shall enumerate some of the ways in which they have been deprived of those fruits.

First. The railways were restored to private management in 1920 in a bad physical and financial condition as a result of two years of government operation. Other industries had been allowed during the war to make huge profits and build up large reserves. The railways were restricted under government operation to the same return that they had earned during the three years ending with Jun 30, 1917; they were provided with less than the normal amount of new equipment; their properties were not adequately maintained; the number of their employees was increased by 300,000. The law under which they were returned to their owners assured them that, under efficient, economical and honest management, they would be allowed to earn a fair return upon a fair valuation. Relying upon that assurance, their managers invested billions of new capital, made their service adequate and greatly improved it. But the government's assurance that they would be allowed to earn a fair return was not kept, but was constantly disregarded and violated year after year. During a long period of prosperity the Interstate Commerce Commission, the members of which had taken an oath to carry out the law, so regulated rates that the railways earned a smaller percentage of return upon the investment in their property than they had ever earned before in any equal period in their history.

2. The failure of the Interstate Commerce Commission to so adjust rates as to enable the railways to earn the return assured them sometimes has been defended upon the ground that traffic could not have stood higher rates either because commodity prices were too low, or because of the development of competing means of transportation. Anybody who will study the figures will find that, as compared with the pre-war bases, freight rates averaged less than commodity prices throughout the period of seven years ending with 1929, and that, therefore, as measured by prices, traffic could have stood higher rates.

Railway Regulation Predicated on Non-existent Monopoly

What, then, about competing means of transportation?

The present policy of railway regulation was and is predicated upon the assumption that the railways are virtually a monopoly. The very fact that it is claimed that they could not have collected higher rates because of competition shows that during this period the basic assumption of railway regulation was false. Whence came the competition that made it false?

First, from steamships operating through the Panama canal. The federal government provided the canal and allowed steamships, without regulation of their rates, to use it for tolls insufficient to pay interest upon the investment in the canal and its costs of operation and maintenance. Then the Interstate Commerce Commission deprived the railways of a large amount of traffic that they otherwise would have secured by repeatedly refusing to allow them to make their rates lower to the Pacific Coast than to intermediate points.

Second, the national and state governments invested billions of dollars in highways, and allowed, and still allow, them to be used for transportation for hire by buses and trucks without making charges adequate to recompense the public for their use and without applying to these carriers any regulation remotely comparable with that applied to the railways. I know the motor interests cite data furnished by Thomas H. MacDonald, chief of the United States Bureau of Public Roads, to show that buses and trucks are paying adequately, but Mr. MacDonald's views do not impress any informed person outside the motor industry because he first assumes a highway for private automobiles about twice as strong and expensive as is necessary for them, and then upon that false basis premises his argument that buses and trucks are paying enough as compared with other vehicles. I know it is also pointed out that trucks are carrying only three or four per cent as much freight as the railways, but this argument disregards the fact that the railways are not only losing freight to the trucks but losing additional revenues because of the necessity of reducing their rates to prevent the trucks from taking still more traffic.

A Subsidy to Shippers by Waterway

Third, the federal government has spent and is still spending hundreds of millions of dollars upon rivers and canals, the total cost of transportation upon which is greater than it is by rail, and which are able to take traffic from the railways only because no tolls are charged for their use, and the entire expenditure made upon them in consequence is a subsidy from the taxpayers to the carriers and shippers that use them.

Finally, the federal government is operating at a loss upon the Mississippi river system a barge line in competition with the railways which was established soon after the war as an "experiment" to prove that private operation of barge lines could be made successful, and which is continued year after year because it always fails to prove what it was intended to prove.

I constantly read and hear criticisms of the railways because they "complain" about competition instead of "meeting" it. Well, what kind of "competition" is this in which one of the competitors is subjected to strict regulation controlling everything it does under penalty of fines and imprisonment and is heavily taxed instead of being aided with taxes, while the other competitors are subjected to virtually no regulation, and are aided with literally hundreds of millions of dollars of the taxpayers' money? It is absolutely dishonest and a mockery of the intelligence and sanity of the American people to tell them, in the face of such facts, that the trouble with the railroads is that they "can not meet competition" and therefore must be incompetently managed. Treat the railroads as their competitors are treated, and then we will soon find out which competitors cannot meet competition.

What else have our governments done in one way or another to put the railroads in their present condition?

Railroad Efforts to Stop Depression

3. Late in 1929, after the stock market collapse, President Hoover asked the railroads, as well as other industries, to maintain their capital and other expenditures as far as practicable in order to help prevent a serious depression. In compliance with this request the railways in 1930, in the face of constantly declining traffic and earnings, made capital expenditures of about

873 million dollars, the largest in any year since 1920, excepting in 1923 and 1926. These capital expenditures in 1930 exceeded by at least 400 million dollars those that would have been made if railway managers had acted on their own judgment. Those who now talk about the loans being received from the government at 6 per cent, when the government gets the money loaned for 4 per cent, as if they were a gratuity, may well be reminded that one very important reason why the railroads are in their present financial condition is that they greatly reduced their cash resources by making the large capital expenditures that they did in 1930, solely for the purpose of trying to help prevent the deepening and prolongation of the depression.

4. The railways also, late in 1929, on the suggestion of the President of the United States, adopted the policy of maintaining wages, whereas previously, under similar conditions, they always soon sought and secured reductions. On July 1, 1921, because of the depression which began late in 1920, the Railroad Labor Board ordered a reduction of 12 per cent in railway wages and a year later ordered another reduction about equally large. That was what enabled the railways to pass safely through the depression of 1921-1922, in spite of a reduction of 10 per cent in freight rates which was made by the Interstate Commerce Commission in 1922 and which all subsequent developments have shown was unwarranted. On the other hand, throughout the two depressed years 1930 and 1931 the railroads maintained the highest average hourly wage that they ever paid, because President Hoover asked them to, and not until February 1, 1932, after more than two years of depression, when the entire industry had become virtually bankrupt, did they secure from their employees a voluntary reduction of ten per cent. If a ten per cent reduction had been in effect throughout 1930 and 1931 it would have saved the railways about 550 million dollars.

Spent a Billion at President's Appeal

As a result of government operation during the war and of the government policies applied to them during the nine years ending with 1929, the railways entered this depression without the large reserves that other large industries had been able to accumulate; with their passenger traffic greatly reduced by the competition of motor vehicles, principally the private automobile; with their freight traffic increased less, largely because of government aided competition, than it had increased in any previous decade since the Civil War; and with their freight rates on too low a level, considering all the conditions. During the first two years of the depression they sacrificed the equivalent of a billion dollars by making unnecessary capital expenditures and maintaining wages in response to the appeal of the President of the United States that they should try to help to maintain business. Owing to these and other causes their managements have beeen forced, during the last year, in order to avoid general bankruptcy, to resort to drastic measures which unquestionably have contributed greatly toward deepening and prolonging the depression. Their expenditures for equipment, materials and supplies in the five years ending with 1929 averaged about two billion dollars annually, while now they are running at the annual rate of less than 600 million dollars annually, a reduction of 70 per cent. The number of their employees has been reduced by 600,000, and the annual compensation of their employees has been reduced from about three billion dollars to about $1,700,000,000.

Because of these vast retrenchments, the railroad physical plant is rapidly deteriorating and if they are much longer continued it will become unfit not only for efficient and economical operation but for a continuance of that increase in the safety of operation which has been one of the greatest achievements of modern railroading. And in spite of all these vast retrenchments the railroad industry is failing by hundreds of millions of dollars to earn its fixed charges, and is rapidly getting more and more deeply in debt to that government whose legislative and regulating agencies have so consistently and persistently followed policies defying all economic intelligence and which they have so often been warned would inevitably lead to railroad bankruptcy, if not to government ownership.

What Senator Couzens' Prediction Would Mean

Some startling predictions regarding the railways are being made during this crisis. Senator Couzens of Michigan, Chairman of the Senate Committee on Interstate Commerce, has predicted for example, that when the depression has passed it will be found that their common stock has been rendered valueless and that ten billion dollars out of the total of 26 billion dollars of their investment will have been lost because the equivalent of that amount in physical property will have to be abandoned and destroyed. He bases his prediction on the prospective effects of the competition of other means of transportation. If this should be the outcome, in what ways would it affect the economic recovery of the country? First, if, as Senator Couzens anticipates, the railways will be able to earn a return in future upon only some 16 billion dollars of their present investment, there will result the destruction not only of the value of their common stock but also of the value of a large part of their bonds and other securities. Second, their ability to give employment directly will be permanently reduced by at least 500,000 men, and their ability to give employment indirectly, because of the curtailment of their power to make purchases, will be reduced by at least another 500,000 men, thus rendering it necessary permanently to release at least one million men to seek new employment. Third, the property abandoned and destroyed will be principally in rural territories which rely largely or mainly upon it for taxes with which to support their schools and local governments, and they will be forced either greatly to reduce their school and local government expenditures or to get the necessary taxes from other sources. This destruction of railroad securities and property, this permanent reduction of railroad employment and purchases, and the changes in taxation necessitated would constitute influences adverse to economic recovery the effects of which would be severely felt in every part of the country for years.

That there is serious danger of the prediction made by Senator Couzens being fulfilled is unquestionably true; but as a student for more than a quarter century of every phase of our national transportation problem I assert that *if Senator Couzens' prediction is fulfilled it will be due to continuance by our national and state governments of the most unfair and economically stupid policies ever applied to a great and essential industry in the history of this or any other country.* The inevitable results will include not only those already mentioned, but also government ownership of railways, because private capital and enterprise will certainly retire from the industry if these policies are continued, and let government incur the political danger of running it and the taxpayers assume the huge losses that inevitably and permanently will result.

The immediate cause of the financial debacle of the railways is that since 1929, principally due to the depression, they have suffered a loss of 50 per cent in

their traffic and earnings. If, however, their present condition was due only to the depression, like that of most industries, they could reasonably expect, on the revival of general business, an increase of their traffic, and especially of their freight traffic, which, with the economies in operation they have effected and others they can and would effect, would enable them to earn a fair return upon their entire present investment and thereby make both their stocks and bonds valuable again. The reason why the railroad industry is in worse condition than any other is that it has been for years subjected to the stupid, unfair and economically unsound government policies to which I have referred; and the reason why it may fail to recover as business begins to improve, and, in consequence, may be for years a serious hindrance to general economic recovery, is that the threat of continuance of these stupid, unfair and economically indefensible policies hangs over it like a pall.

A Program for Railway and Business Recovery

What should be done to enable the railways to recover when general business begins to revive, and thereby enable them to aid in, and not retard, the general recovery?

1. Withdraw from the Interstate Commerce Commission and all state commissions all power to regulate rates excepting to correct and prevent unfair discriminations. In 1910 freedom to initiate rates was taken from railway officers by giving the Interstate Commerce Commission power to prevent proposed changes, and that power has been more and more abused by the commission to restrict railway earnings in periods of prosperity until we are now confronted with the inevitably consequent railroad financial debacle in a period of depression.

2. Apply by appropriate legislation the same prohibitions and penalties regarding unfair discriminations to all carriers by water and highway that are now applied to the railways, and require them to be enforced against all other carriers by the same authorities that are now required to enforce them against the railways.

3. Withdraw every vestige of subsidy from all carriers by forcing them, by appropriate national and state legislation and administration, to pay sufficiently for the use of waterways and highways to relieve the public of all taxation now borne by it resulting from the use of public property for transportation for profit in competition with the railways. Neither in equity, law nor sound economics is any person or corporation entitled to use public property for private gain without paying the public full compensation for such use.

4. Give to the railways by appropriate legislation the same rights to operate trucks and buses upon the highways and boats upon the waterways as are given to any other company.

5. Withdraw the federal government from the operation of its barge line upon the Mississippi river system.

6. Either apply to all industries comparable legislation regulating the relations between employers and employees, or repeal the Railway Labor Act and give railway managers the same freedom in dealing with employees as managers of other kinds of business have.

Low Wages of Competing Transport Injure Railways

One of the principal reasons why it is so difficult for the railways at present to meet competition is that, owing to circumstances now largely beyond the control of their managements, they are paying much higher wages per hour than competing carriers. I am in favor of as high wages in industry as anybody else, but if, as most people still agree, the railroads are an essential industry, it is perfectly senseless to destroy their capacity to make earnings and purchases, to earn a return upon their investment and to give employment, by subjecting them to requirements as respects wages, working conditions or anything else to which no other industry or competing means of transportation is subjected.

All that the legislation I have proposed would do would be to give to railway managers the same power to manage their business that managers of other business concerns have, and opportunity to compete on equal terms and without government favoritism with other carriers. The existing policy of regulation is based upon the assumption that railways are a monopoly. Why continue a policy predicated upon an assumption that has become obviously false and continuance of which can be only unfair, destructive to an essential industry, its security owners and employees, and thereby, in large measure, destructive to the public welfare?

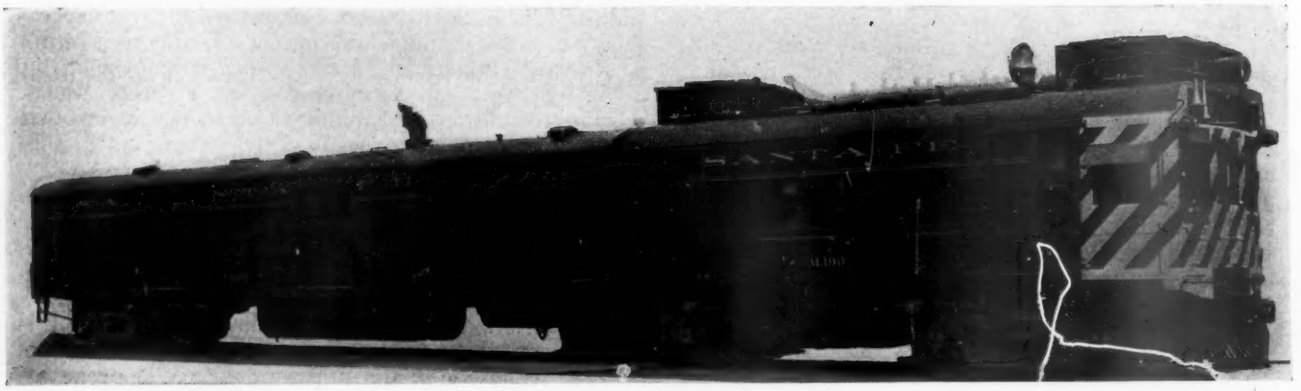
Can the railways aid in the economic recovery? Can the railways "come back"? After two years of ruinous wartime government operation it was confidently and repeatedly predicted that they could not "come back" under private operation, but they did, and under great difficulties, during the decade ending with 1930, improved their service and increased the efficiency and economy of their operation as much or more as in any decade in their history. The railways can "come back" again, and can and will aid greatly in the economic recovery, if the American people, through their national and state governments, will give them a fair chance. If they do not come back, and aid in the economic recovery, it will be because the American people have not enough intelligence to give them a fair chance.

Let us not deceive ourselves. Prosperity is not going to be restored by government action that disregards fundamental principles of fairness and economics. It is not going to be restored by artificial means such as loans and doles. Physicians can help to keep a patient alive through a crisis by giving him oxygen or blood transfusions, but only normal living, fresh air, proper food and exercise will restore him to health. What the industry and commerce of this country need from the government is only the amount of oxygen or blood transfusions required to enable them to pass through the crisis, and what will be needed to restore prosperity will be less and less attention from the government doctors in Washington and at our state capitols, and more and more freedom for private enterprise and courage to do those things which the entire history of the world demonstrates that they alone can do. I am not advocating any more government oxygen or blood transfusions for the railroad industry than for any other industry. What I am advocating for it is the same opportunity to convalesce as other industries and a cessation of the governmental stupidity and quackery by which the railroads for twenty-five years have been bled white in the supposed interest of the public.

No General Recovery Unless Railroads Recover

Economic recovery will come in virtually all our major industries, or it will not come at all. It cannot come in most of our great major industries unless it is given opportunity to come in the railroad industry. The transportation service essential to a complete revival of industry and commerce cannot be rendered without rehabilitation of the railroads, physically and financially. No other existing means of transportation can render the required service. Various interests,

(Continued on page 88)



Santa Fe 900-Hp. Articulated Rail Car Ready for Service

Santa Fe Gets Most Powerful Rail Car Yet Built

Articulated unit, 90 ft. long, develops 900 hp. and is designed for speeds up to 80 m.p.h.

IN an effort to develop the further possibilities of power rail cars for improved passenger-train service, the Atchison, Topeka & Santa Fe has recently placed in service the largest and most powerful rail car of the gas-electric type yet constructed. This car, of practically all-steel construction, is about 90 ft. long, weighs 245,000 lb., and develops a maximum of 900 hp., sufficient to haul four heavy passenger cars as trailers. The car is intended to meet a wide range of operating conditions, being suitable for low speed, heavy-duty operation, such as branch-line or mixed-train service, and at the same time, capable of speeds up to 80 m.p.h., where the loads are light and track conditions permit. Either gasoline or distillate can be burned as a fuel, being supplied from a 780-gal. tank underneath the car.

The design of the car, itself, is unique in American railway practice in that the front 30-ft. section, housing the power unit, and the rear 60-ft. section, used as a baggage and express compartment for revenue purposes, are separate structures, united through the medium of a center truck and an articulated type of construction. The car bodies and trucks were built by the Pullman Car & Manufacturing Corporation and the power unit by the Electro-Motive Company, Cleveland, Ohio. The outstanding feature of the power plant is the prime mover, a heavy-duty, 12-cylinder, V-type Winton engine, with 9-in. bore and 12-in. stroke, developing 900 hp. at 900 r.p.m. This engine is the latest development of the Electro-Motive Company to meet the demands for increased power in rail-car service. The electrical transmission consists of a General Electric direct-current generator, necessary transmission and control apparatus, and four G. E. heavy-duty railway traction motors of ample capacity to transmit the power of the engine to the driving wheels in the front and middle power trucks.

The operator's compartment in the front of the power section of the car is separated from the engine-room by a partition, and ventilation for the engine-room, itself, is provided by an air duct from the front of the car. This partition dampens engine noises, and allows the operator to control the amount of draft in his compartment without interfering with the passage of the large amount of air required for ventilation of the engine-room compartment. All instruments are located for convenient visibility from the operator's position, engine-control and air-brake levers being within easy reach. A safety control feature is incorporated and separated by a foot lever. Westinghouse ET-6 brake equipment is installed with the H-6 automatic valve and S-6 independent valve mounted on a brake-valve pedestal.

The trailing section of the car carries a steam heating boiler capable of evaporating 1,000 lb. of water per hour, or sufficient to heat four cars in severe weather and five cars under ordinary weather conditions. The Otis vertical fire-tube flash-type boiler, furnished complete with all controls by the Vapor Car Heating Company, is designed for safe and entirely automatic operation. It is notable for compact design and a thermal efficiency of about 92 per cent. On account of provision for the future installation of a 15-ft. mail compartment in the forward end of the trailing section, the heating boiler is located near the center of the baggage compartment.

Articulated Construction Specially Designed for Safety and Flexibility

The underframe of the forward or power section of the car is a one-piece steel casting which also serves as a common bed plate for the engine and the generator. The rear end of this power-plant underframe is cast to form an articulated joint with a steel casting forming the forward end of the trailer underframe. The two centerplates interlock and, as an extra precaution for safe connection, a heavy, safety locking bar is intro-

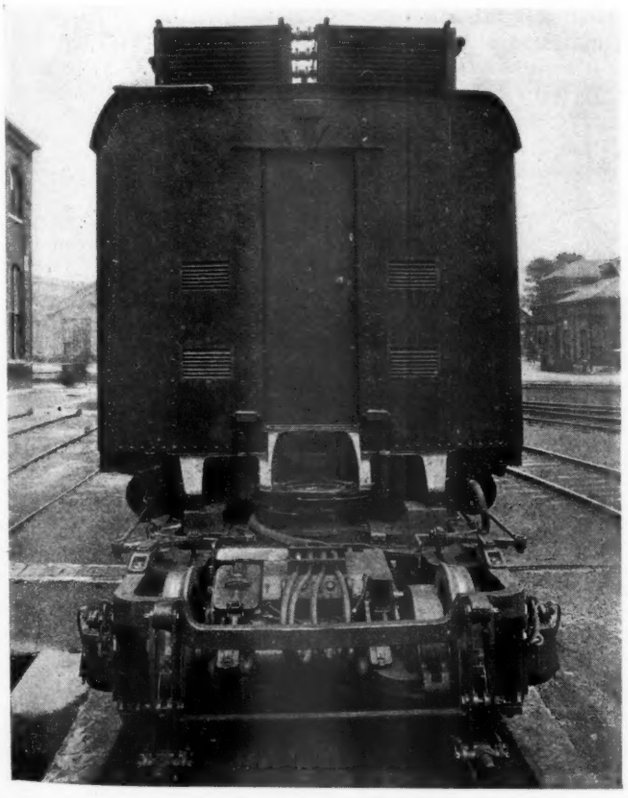
duced. The underframe of the power unit and the end sill of the trailing baggage unit were made by the General Steel Castings Corporation, Commonwealth division.

As the car is intended for operation in one direction only, no draft gear is provided on the front end. A swivel coupler only, mounted in a pocket cast at the end of the underframe, is furnished without a buffing device. The rear of the car is provided with a Miner A-5-XB friction draft gear and B-10-X buffer.

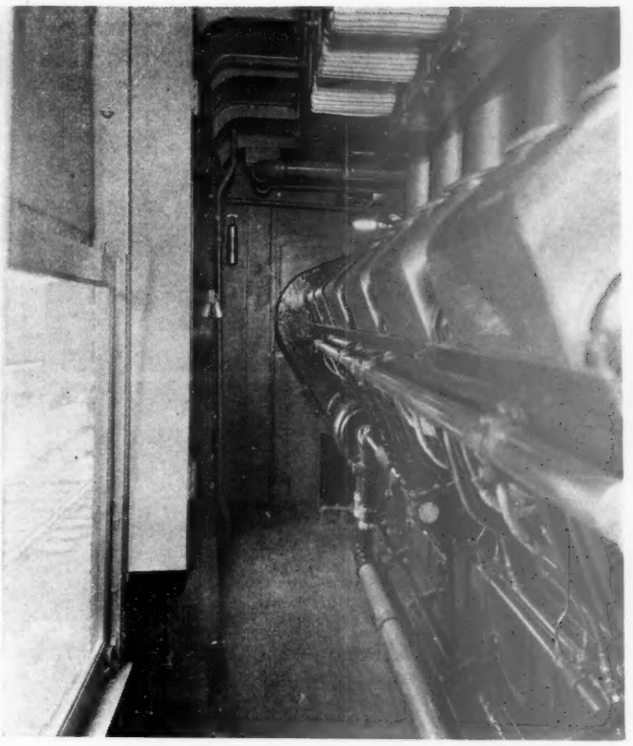
The car trucks, of the Commonwealth 4-wheel, cast-steel, drop-equalizer type, carry 105,000 lb. on the front truck; 90,000 lb. on the middle truck and 50,000 (light) on the rear truck. The two power trucks have 36-in. rolled-steel wheels and the trailer truck 32-in. Davis cast-steel wheels. All trucks are equipped with Simplex Unit-Cylinder brakes furnished by the American Steel Foundries. The leading and intermediate trucks are equipped with a beamless clasp brake rigging, whereas the trailer-truck clasp brake has the customary clasp brake beams. In other words, the clasp brake rigging has all the distinguishing characteristics of the current standard motor and trailer truck brakes, with the addition of the Unit-Cylinder feature, which consists of two air-brake cylinders applied at the inside ends of the truck frames. The brake cylinders actuate horizontal equalizers supported from the truck frame, and these equalizers, through the medium of pull rods, transfer the required braking power to the brake shoes.

The Unit-Cylinder brake makes unnecessary the use of body brake rigging, leaving that portion of the underframe between the trucks available for the application of gas and water tanks, electrical and other special equipment.

Other advantages of this construction include the elimination of considerable lost motion, vibration and noise, possibility of shorter, smoother stops, greater ease of inspection and repair, and absence of any interference with truck swiveling on curves.



The Power Unit and Middle Truck before Assembly with the Trailer Section



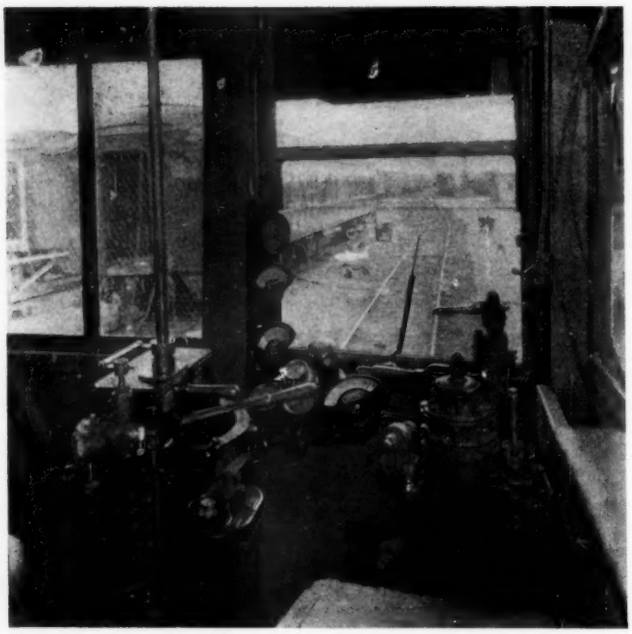
Ample Passageways Are Provided Around the 900-Hp. V-Type Engine

In designing the power unit, thought was given to provide accessibility to the traction motors so that they could be readily inspected and lubricated. All pipes extending over this portion of the truck were kept high on the car body and low on the truck in order to improve the condition and help the maintainer. The front end of the power unit is striped black and white to attract attention and minimize the possibility of grade-crossing accidents. Pilot application is arranged for easy removal, or adjustment to give the required height above the rail, dependent upon wheel wear and other operating conditions. The air and steam connections between the two units are of such design that standard 1⅛-in. signal and 1¼-in. air hose can be used. The steam joint between two units is a metallic ball joint design. Sand is delivered to the wheels of the center and front trucks, being brought down through pipes from a sand box on each inside wall of the power unit.

Behind the operator's station is a compartment which contains the main engine, electric locker and batteries. The battery location inside and at the rear of the engine-room was chosen for greater accessibility and in order to add weight to the center truck. The batteries are of the Exide MVAH-25 type, having 32 cells and 450-amp.-hr. capacity. The entire floor of the cab and engine-room is covered with linoleum in order to promote cleanliness. All doors in the power unit are of the sliding type, in the interests of safety. Convenient locker space is available in the engine-room for the use of the operator. In addition, containers have been installed for instruction books, torpedoes, flags, etc., thereby further inviting neatness in handling this car.

Features of the Power-Plant Installation

A feature of the 900-hp. engine prime mover of this car is the two-stage air compressor, built into the engine.



Conveniently Located Instruments and Control Equipment in the Operator's Compartment

This is a twin-cylinder compressor with a displacement of 70 cu. ft. per min., which can be operated at any desired main-reservoir pressure up to 150 lb.

The engine is provided with a carburetor for each cylinder for burning either gasoline or distillate, and throttling is accomplished by control of the intake valves. The purpose of the individual carburetors is to shorten the travel of the fuel and air mixture, thus allowing the use of cheap non-volatile fuels and insuring even distribution of fuel to all cylinders. It is expected that the problem of fuel distribution, the greatest drawback to the construction of large engines of this type in the past, will thus be satisfactorily solved.

Air distribution to the 12 cylinders is accomplished by a triple manifold, two branches of which pass from end to end of the engine through the cylinder head, and with a central feeder branch running the length of a cylinder-block casting. The three branches are tied together by lateral connections on each side of each cylinder. Air is brought in through felt air cleaners under the roof of the car to the central feeder branch of the manifold and distributed to the other two branches through the lateral pipes.

Fire Hazard from Back Firing Eliminated

This arrangement which distributes air alone, picking up fuel at the intake valve of each cylinder, eliminates the handling of any fuel and air mixture, outside of the cylinders and so eliminates fire hazard from back fires.

The engine has two exhaust valves on each cylinder; and advantage is taken of angle of the cylinder so to lead the exhaust outlet directly upward from the cylinder head in an individual exhaust pipe to a combined manifold and muffler above the car roof.

Twenty-four exhaust valves are operated by individual rocker arms, actuated directly from the two cam shafts, and these individual rocker arms are provided with automatic lash adjusters, which eliminate the necessity for the adjustment of valve tappet clearance. The inlet valves, being hydraulically operated and controlled, also require no clearance adjustment.

Each cylinder has an individual head. These heads are aluminum alloy and are fitted with aluminum bronze valve seats which are highly resistant to gas erosion.

The generator is of the single-bearing type, with built-on exciter and differential field control of the voltage which has become conventional for all classes of motor cars, and is unusual only in that the exciter is not used for battery charging.

The batteries for engine starting and car lighting are charged when the power plant is working from an independent generator, delivering the current at constant voltage and not affected by engine speed.

When the engine is idling, the batteries are charged from the main generator. Provision is made in the battery-charging generator to reduce the charging rate to a trickle charge, when the battery is full, thus preventing gassing, overheating and deterioration of the plates.

Traction Motors of New Design

The traction motors are of new design, with roller bearings on the armature shaft and with commutator construction and armature banding designed for car speeds up to 80 m.p.h.

Cooling air for these traction motors is brought down through ducts from the interior of the car body and the entrance of air to the car body is confined to the front, thus providing the cleanest possible air for cooling the motors and avoiding the problem of dust, stirred up by the passage of the car.

The use of roller bearings on the traction motor armatures eliminates the necessity of attention to waste-packed bearings, which, on large motor cars, are difficult to reach. Similarly, all other details of the power plant, as well as of the car itself, have been developed with a view to minimum attention during an extensive service life. Full provision has been made for the ready inspection, lubrication and repair of such parts as require this attention periodically under ordinary service conditions.

Otis Vertical Fire-Tube Flash-Type Boiler in the Baggage Compartment—Locker and Toilet Facilities Also Shown

A Neglected Ally?

Are the railways taking full advantage of the effective force of advertising in their battle against far-flung competitors?

By J. E. Anderson

Manager, Resort & Travel Advertising Dept., Chicago Tribune

THIS is a day of intense competition—competition not only between the companies in each industry but between industries themselves. Furthermore, competition has been intensified to an even greater degree by the prolonged business depression. Even in the days of greatest prosperity, when everyone seemed to have more money than he could possibly use, there were only so many dollars in the public pocket to be distributed among all industries selling to the public. Today there are still fewer dollars to be spent. Any company, any industry which wants some of the public's dollars today must fight for them, using every weapon at its command. This is a day when the salesman is in the saddle. It is a merchandising era, and the railroads are in it as surely as the manufacturers of automobiles, radios, soap, or what not.

The principal competitor of a railway agent in the sale of tickets is not the agent of another railway which happens to run trains to the same point. The principal competitor of the railway agent is the local automobile dealer, the radio shop, even the moving picture theatre. The public has only so much money to spend. Who will get that money? The public's money will go to that individual or that company or that industry which is able to convince the public that its products are more desirable than those of any other individual or company or industry. In other words, whoever does the best job of selling will get the public's money. Whether the product is a so-called luxury or necessity seems to make relatively little difference. The line of demarcation between luxuries and necessities has been virtually wiped out in recent years by shrewd and determined merchandising methods which have made many erstwhile luxuries appear to be vital necessities in the public mind.

A Dangerous Theory

The time has passed—if there ever was such a time—when the railways could sit back and wait for business to come knocking at the door. A railroad advertising agent once wrote, "A railroad is primarily a public utility. The peculiar duty of a public utility is to be there when wanted—and not until then." It would be difficult to conceive of a line of thought potentially more dangerous to the railways than this. It is the "peculiar duty" of a railroad to insure its continued existence, to furnish the best service that it knows how to provide, and to see that that service is sold to everyone who should use it. The successful gas company is not content to let the public use only so much gas as the public thinks it needs to use. It profits by telling to the public the desirability of new kinds of uses of gas for cooking and heating. The electric light company does not wait quietly for the public to turn on an electric light. It advocates, advertises and brings about the use of two or three lights where one was thought to be sufficient before. The telephone company is not content to let its product sell itself. It carries on an intensive selling campaign to promote wider uses of telephone service, and it is succeeding. It is well for the railways to remember that many a business deal closed by long distance telephone means the loss of a round-trip passenger. The railways are beset by myriad competitors. The railways must fight for business with the same weapons used so successfully by their competitors. One of these weapons is advertising.

Market for Railroad Transportation Dwindling

Railroads, like other industries, have something definite to sell, and railroads, like other industries, require modern methods of merchandising to effect the sale of their products. At present, railroad passenger transportation is in the position of an established product for which the market is dwindling. There is no necessity to call to the attention of railroad men the alarming decline in passenger travel on the railways which has marked the last decade. Yet, with the terrific decline in sales which the railroads have suffered, there has been no corresponding reduction in the railroads' production of passenger transportation. Railroad production of passenger transportation, while well below the peak, is still far above the current consumption of passenger transportation. The result is empty seats in day coaches, parlor and Pullman cars, and half empty trains running back and forth across the country. Railroad passenger transportation has well been called the most perishable of commodities. It must be purchased and used as produced, or it will never be used at all.

Reference has frequently been made to outstanding examples of over-abundance of train service. That between Chicago and St. Louis, Mo., is an instance frequently referred to. Unquestionably, there is not enough traffic by rail between Chicago and St. Louis at the present time to fill all the trains running daily between these points. Observation indicates that many of these trains are running less than half full. Rumor has it that one train recently made its run from Chicago to St. Louis entirely empty except for the train crew. Yet it is quite possible that if all the travelers now going between Chicago and St. Louis by automobile or by airplane were to be handled by train, the service between Chicago and St. Louis would be used to a point comfortably near its capacity. Whether these potential passengers of railway trains can be made actual passengers is a question, but certainly whether any or all of them ever will be made actual railway passengers must depend upon the salesmanship and merchandising tactics of the railroads.

Advertising, a Sales Weapon

One sales weapon which railway competitors are using, and which, therefore, the railways themselves must use, is advertising. Much has been written about advertising and what it can do for railroads, and very probably a great deal more will be written. It is not the purpose of this article to contend that advertising is a cure-all for the ills of the railways, nor is it its pur-

pose to condemn the advertising which railways are doing. Rather, its purpose is to indicate certain means by which railroads can make more effective use of advertising in their strongly contested battle for the public's dollars.

There are at present two distinct types of railroad advertising, one to sell transportation for the business journey, and the other to sell the vacation trip. There is a third, if we are to consider the luxury of institutional advertising. Much of this advertising is designed to attract favorable public attention to individual trains, and this program is sound because, whatever the type of business desired, the greatest advantage a train can have is to be well and favorably known. People, more than ever, are selecting trains by brand names. People do not like to use trains that others do not recognize. The public's opinion of some trains is much higher than the trains really deserve. Other trains are finer than the public's opinion of them. All railroad officers can name a dozen or more trains with the finest equipment which enjoy nowhere near the favorable opinion that a few trains have enjoyed for years.

Popular Trains Are Advertised Trains

New equipment alone is not the answer. New equipment, in itself, cannot create public opinion. The popular trains are the advertised trains, and this statement will be verified by a few minutes' thought. What trains does one think of in connection with European railroads? There are about five, the Rheingold, the Golden Arrow, the Flying Scotsman, the Royal Scot and the Orient Express. All of these are advertised and all have captured the public's imagination to such a point that they have come to stand for all that is finest in railroad travel. The same is true in this country. It is true that some of the empty and unprofitable passenger trains in this country are advertised trains. The railroads—particularly some railroads—advertise rather extensively. But the point to be made is that the advertising is of the wrong kind or it would produce better results.

The railroads need advertising that arouses controversy, advertising that makes people talk. Trains can be made topics of conversation among travelers when the advertising offers something to talk about. Every advertising manager knows the value of getting people to talk about his product, and when a railroad man can make people argue about the speed or service or comfort of his train, he has done that train a great service.

Advertise in the Right Places

Advertising has to go in the right place. An analysis recently made shows how far off the track it can go. It was found that 70 per cent of the entire advertising appropriation of a particular train was being spent in territories which produced only 22 per cent of the business for that train. In other words, the territory producing 78 per cent of the train's business was being cultivated with only 30 per cent of the railroad's publication advertising. That advertising campaign was running under slow signals from the start.

Examples of successful concentration in advertising are numerous. Some years ago the city of Savannah, Ga., had an appropriation of approximately $50,000 for advertising. Newspapers, at least 3 or 4 in each of 15 metropolitan centers, were used. Twenty-four national magazines received advertising orders. As a consequence, no individual advertisement could appear more than once or twice in any publication, and the most optimistic enthusiasts would hardly have said that the units of advertising space were dominant in size.

It just happened that in the same year an organization was formed to advertise the Mississippi Gulf Coast. It was a coincidence that the Mississippi Gulf Coast Club likewise had exactly $50,000 to spend. The logical markets for what they had to sell were selected, and dominant units of space were used in three metropolitan centers. A great deal of comment was caused and the Mississippi Gulf Coast Club was thought to be a tremendous organization with hundreds of thousands of dollars back of it. The railroads serving the Mississippi Gulf Coast will still recall the interest which this campaign created and the traffic which resulted from it. The results of the Savannah campaign were not so favorable.

Concentration of Advertising Essential

Most railroads' advertising appropriations are limited this year. The more limited they are, the more necessary it is that they be concentrated in places where they are most likely to find passengers. It is a time when indiscriminate use of all advertising media, whether they are good or bad, should be discontinued. It is true that when newspapers were not the profitable commercial institutions that they are today, and when editors were also advertising managers, there might have been some justification for the indiscriminate purchase of advertising space. There is no such justification today.

Nevertheless, we still see railway executives permitting advertising appropriations to be expended in media which show very little value, even upon the most cursory examination. Yet these same executives are properly proud of the ability of their engineers to thoroughly test rolling stock and other equipment and to make sure of their merits before purchase. Tests of the real value of advertising space should likewise be made before it is purchased. This is not done now, and as a result much railroad advertising money is literally thrown away.

Successful railroad operation today is accomplished by means of locomotives which will pull heavier loads and pull them faster than did the locomotives of a few years back. There are not so many of them, but they generate more power. Perhaps this—fewer but more powerful carriers—is part of the solution of the railroads' advertising problem.

TWENTY PERSONS were killed and seventeen were seriously hurt when a passenger train was derailed on the Angora line of the Turkish Railways, near Beylikeupru station, according to United Press dispatches from Istanbul, Turkey, under date of July 11.

THE LONGEST BRIDGE IN AFRICA, spanning the Benue river at Munshi Narrows, Makurdi, Nigeria, was placed in service by the Nigerian Railway on May 24, according to the Railway Gazette (London). Originally projected in 1913 and actually begun in February, 1928, the new bridge accommodates both rail and highway traffic, replacing a train ferry operated since 1923, when railway construction was completed to both banks of the river. With a total length between abutments of 2,584 ft., including ten 180-ft. deck girder spans and three 240-ft. through girder spans, the bridge represents an investment of approximately £1,000,000. It is designed for an 18-ton axle load; while between the center spans and the normal flood level of the river there is head room of 40 ft. for navigation. Over 1,300 men were employed in construction, which also required 8,600 tons of steel and 84,900 tons of concrete. The principal economic importance of the new bridge comes from its completion of through all-rail routes between Port Harcourt, seaport for the Eastern Provinces of Nigeria, and the north; and between the Udi coalfield and the tin mines of the Bauchi plateau.

Naming "Czar"

No Reflection on Managements

Function of heads of individual railroads is and will continue to be to protect their own properties—An impartial chairman would perform an entirely different task, that of protecting the whole industry, a job which now is the definite responsibility of no one

By F. J. Lisman

THE demand on the part of security holders, as well as of regulating authorities and bankers, for the elimination of competitive wastes by the railroads, is in no way a reflection on the officers of the railroad companies. The presidents, traffic and operating officers of the various companies have been selected strictly from the point of view of looking out for the benefits of their particular companies and the bulk of them are doing the best they can according to their lights.

The railroads, as has been often said, have been developed in a major spirit of competition and the public has been taught that it wants competition, without realizing that much of this competition is grossly wasteful. In times like these, when the margin of profit is disappearing, wasteful practices must also disappear. Hence the demand for their elimination.

"Shipper Terrorism" Prevents United Front

The carriers have made much progress in reducing expenditures in every direction, including those for competitive purposes—for example, by reducing passenger train-miles and in many other directions. However, owing to what is well described as "shipper terrorism," they have not made and cannot make much headway in combating wasteful expenditures in connection with freight traffic because by the very nature of their organization they cannot present a united front to the shippers. As a matter of fact, the railroads, like industrial concerns, with declining business are all making extraordinary efforts to get an additional volume of traffic which they can only do by getting customers away from their competitors.

They are all very busy at this and when the year is up, they no doubt all show that they have succeeded in getting additional customers from the other fellow but in the long run it is an empty victory. They are all more or less where they were at the beginning after having expended prodigious efforts and substantial sums. The traffic department as a whole shows only about one-half as much decrease in percentage of expenses as the maintenance or transportation departments, which seems to prove this point. A reduction of one-third in traffic expenses would produce approximately as much net as now appears is likely to be the result of the fifteen per cent rate advance case.

If the Western carriers will agree, as they are now reported to be about to do, on selecting a commissioner to help them eliminate competitive wastes, they will not only greatly reduce their traffic expenses but they should substantially reduce their transportation and maintenance expenses.

For example, there are a number of cities or towns within a radius of 500 miles of Chicago which have a nightly package car service from Chicago via two to five different roads, with loads averaging but very seldom over 5,000 pounds. Surely much of this business could be pooled, or a commissioner might say to Road No. 1, "You stop your non-remunerative package service to City A" and he could say to Road No. 2, "You also stop your service to City B where Road No. 1 seems to be doing the bulk of the business anyway."

"Umpire" Can Take Broader Viewpoint

The railways might do this by themselves by mutual agreement but everyone who understands the situation knows that in each case each carrier will have a special plea why its line should not do this particular thing. The officers of the lines cannot be particularly blamed for this because they look at it from the point of view of their own company and its prestige. An umpire or joint commissioner would look at it from the point of view of the revenues of the carriers as a whole and would probably disregard the matter of prestige of the particular carriers. Talk of prestige seems to be disappearing pretty fast anyway, when the stocks of almost every railroad running out of Chicago, listed on the New York Stock Exchange, are selling below 10.

We are now at the point of really entering a new era—but not in the 1929 sense. The power of competition, or self-interest, whether among nations, producers of commodities or carriers, has become so great that they will either wreck each other and our boasted civilization or they will have to co-operate to their mutual benefit.

Chaos or Co-operation?

Therefore, we are entering an era either of something akin to former provincialism, barbarism and chaos or a period of greater human co-operation with ultimate benefits to all parties concerned. If it is chaos which we are entering, then the type the railroads are likely to enter into first, will be government ownership without personal incentive for improvement or service and with maximum salaries to the highest officers no higher than those paid to U. S. Senators or members of the Interstate Commerce Commission.

If, instead of chaos, we are to enter into an era of co-operation, then everyone must necessarily surrender some power which really is not vital to him, for the greater benefit not only of the shipping and investing public but to himself, individually.

Pennsylvania Builds Model Livestock Building at Philadelphia

New three-story structure of reinforced concrete construction, within 2½ miles of center of city, provides sanitary quarters for 70 carloads of cattle and hogs

Looking Along the West Side of the New Stock Pen Building

THROUGH the co-operation of the Pennsylvania and local livestock and meat merchants, the city of Philadelphia, Pa., has been provided with one of the most modern, sanitary, and, in many respects, unique stock handling and meat-packing centers in the country. The new development, which cost in the neighborhood of $5,000,000 is located on a 10-acre plot at Thirty-sixth street and Grays Ferry avenue, in West Philadelphia, in a not undeveloped territory, and only about 2½ miles from the center of Philadelphia proper. In this location, the ordinary uncovered type of stock yards and meat packing facilities would be out of the question, but the facilities which have been provided are hailed as attractive, sanitary and inoffensive, and as an asset to the more or less industrial community of which they are a part.

The new meat center, which is laid out on the east bank of the Schuylkill river, fronting on the Grays Ferry Avenue bridge which crosses the river at this point, includes mainly a three-story stock pen building, with approximately 235,000 sq. ft. of pen space; a $2,000,000 pork-packing plant, with 192,000 sq. ft. of floor area; and an abattoir plant, equally as large and modern as the pork packing plant, where an average of 8,500 head of cattle, sheep and calves are being slaughtered and prepared for market weekly. The entire meat center, which is enclosed by Cyclone protection fence, is served by railroad tracks and wide concrete driveways and paved areas.

Stock Pen Building is Outstanding

While each of the specific facilities at the new stock and meat packing center are of interest, the facility of largest interest to the railways is the stock pen building, which was constructed by the railroad and leased to a local stock yard company. This building, which is 388 ft. long by 202 ft. wide and three stories high, with a fourth floor across the front for office purposes, is a reinforced concrete structure throughout, with extensive areas of ventilating sash on three sides, and a large ventilation and light well, 180 ft. long by 35 ft. wide, through the center, open on the first floor and enclosed by ventilating sash on the upper floors. The building, which cost approximately $1,000,000, is supported on 2,365 composite piles, ranging in length from 30 ft. to 60 ft., these piles consisting of timber to a point above ground water, surmounted by cast-in-place concrete units.

In the layout of the building, which lies in a general north and south direction, the first floor is used for the receiving, temporary holding and shipping of livestock, and also for feeding in transit service. This floor has a total of 84 pens, which include 30 receiving pens for all classes of stock in the section served by the Pennsylvania's tracks; 12 receiving pens in the section served by the Baltimore & Ohio; 2 pens for tuberculin tested cattle; 10 combination pens for the holding, feeding and watering of either large or small stock; 6 bull pens; 12 small pens for holding stock to be taken out by truck; 4 sheep-dip holding and dripping pens; and 4 holding pens at scales.

The track facilities serving this floor, which is at car-floor height, include two stub-end tracks of the Pennsylvania through the center of the building, directly beneath the large light and ventilation well, and one track of the Baltimore & Ohio, which extends along the east side of the building. The Pennsylvania's tracks, which enter the building from the south, have a capacity of seven cars each, and unload directly under canopies on to platforms with direct connection with the receiving pens. The B. & O. track has capacity for five cars, and is served by a covered platform over which the stock can be moved to any of the 12 assigned receiving pens for further assignment later. Truck loading and unloading facilities are provided at the southeast corner of this floor, where 10 pens have been set aside, with direct connection with the other pens on the floor, and within close range of a five-ton, electric, automatically controlled elevator which serves all floors.

Special Features of First Floor

In the general arrangement of pens on this floor, each side of the building has two rows of pens, separated by a wide alley. The alleys on opposite sides of the building are joined by an alley of equal width through the center of the north end of the building, beyond the stubbed ends of the Pennsylvania's tracks. Thus, stock

received at any point on this floor can be routed readily through the alleys to any pen desired.

Other facilities of interest on the first floor include an office, a locker and wash room area in the southeast corner of the building for the use of employees; the 10,000 lb. capacity automatic freight elevator near the truck loading and unloading pens for the handling of small shipments of cattle between the floors of the building; two hay storage rooms and a grain storage space near the north end of the building, served by a 6,000 lb. capacity, electric, automatic elevator; and four scales, two on each side of the building, for the weighing of stock as it is received. One of the scales on each side has a capacity of 4,000 lb. and is used for weighing small animals or stock individually, while the other scales, each of which has an enclosed platform 30 ft. long by 14 ft. wide, and a capacity of 40,000 lb., are used for weighing stock in carload lots.

Another of the special facilities on this floor is a dipping tank for the disinfecting of all sheep which are to be sent out on farms for feeding and breeding purposes. This tank, which is about 36 ft. long, 20 in. wide, and 4 ft. 6 in. deep, has dripping pens at both ends, sloped to carry the disinfectant back into the pit, and the sheep can be moved through the tank in either direction as desired.

Details of Second Floor Arrangement

The second floor of the building is known as the sales floor, and it is here that stock consigned to local commission merchants is fed, sorted and sold. Altogether, there are 59 pens on this floor, 40 of which are suitable for either calves or sheep, while 7 pens are designed exclusively for large cattle and the remaining 12 pens are designed and fitted for holding hogs as well as calves and sheep.

In general, the pens on this floor are arranged more or less similarly to those on the first floor. For the convenience of the trade, the pens along the east side of the building are used primarily for feeding purposes and those along the north end of the building for sales and sorting purposes, with the remainder of the pens along the west side and south end for holding stock to be sold.

Special facilities provided on this floor include locker and wash facilities for the commission men and dealers, a manure storage room, hay and grain storage rooms more or less similar to those on the first floor, and served by the same elevator, and three scales, two of which are for weighing single animals, and a third, which is similar to the carload lot scales on the first floor.

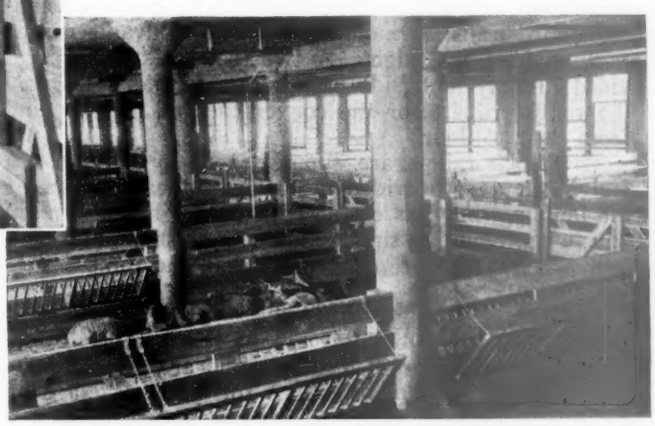
The third floor of the building, which is at the level of the approach to the Grays Ferry Avenue bridge, is used primarily for the holding of all classes of stock to be slaughtered in the abattoir and the pork packing plant in direct connection with the stock pen building. On this floor, back of an area 36 ft. wide along the south end, facing on Grays Ferry avenue, there are a total of 76 pens, grouped, as on the lower floors. Twenty-eight of the pens, located along the east side of the building, are designed for the use of hogs only, this section being allocated to hogs because of its nearness to the pork packing plant immediately east of the building. In addition to the hog pens, there are 16 pens for sheep and calves in the northwest corner of this floor, and 32 larger pens for cattle along the west side of the building and near the south end of the ventilation well.

Connection between the hog pen area on the third floor and the pork packing plant is by means of a structural steel, covered bridge, about 100 ft. long. This bridge enters the stock building at about the mid point of its length, making it convenient for driving hogs to it from any of the pens. A special feature directly at the entrance to the bridge from the stock building is an effective arrangement provided to facilitate the taking of the temperature of hogs which appear to be sick.

Connection between the third floor of the stock building and the abattoir plant where cattle and sheep are slaughtered, is by means of a covered bridge which extends from the northeast corner of the pen building. This bridge, which is about 460 ft. long, is provided with both a cattle run and a separate walkway for the cattle driver or anyone passing between the two buildings.

The only special facilities on this floor in the part devoted to pens are hay and grain storage rooms, a manure storage room, and a pump room. The main difference between this floor and the other floors is in the area 36 ft. wide across the south end, facing on Grays Ferry avenue. This area is divided transversely into two mainsections, one, 156 ft. long, which is used as a garage, and the other, 46 ft. long, which is fitted as a restaurant. These facilities are provided mainly for the trade and the employees of the company operating the building, although the restaurant is open to the public.

Directly above the garage and restaurant, a fourth floor is provided, which is divided into offices for the operating company, local commission merchants and dealers, a railroad agent and Western Union and Postal telegraph stations. A large general meeting room is also provided on this floor. All walls and ceilings are plas-

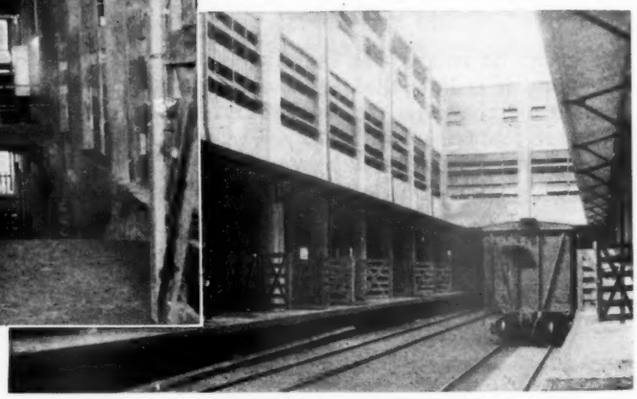


Left—A View Through One of the Alleys Showing the Stock Pens on Both Sides. Below—All Three Floors of the Building Are Light and Dry

tered, and all floors are covered with linoleum, except the corridor, which has terrazzo tile flooring. Through these facilities, the local merchants and dealers are afforded offices convenient to the stock pens. As a matter of special convenience, all of the offices interested have direct telephone connection with the various pen floors.

Cattle Ramps Provided Between Floors

In addition to what has already been said concerning the stock pen areas of the building, there are other features of interest in these areas which have large bearing on the sanitation of the building, the well-being of the livestock housed, and the efficiency with which the plant can be operated. The stock is moved between floors on inside ramps, one between the first and second floors and two between the second and third floors. All of the ramps are of reinforced concrete construction, 8 ft. wide and about 88 ft. long, and rise through the distance of 16 ft. between floors on a grade of about 18 per cent. They are provided with wide brick cleat treads and are enclosed on the sides by two-foot concrete curb walls, surmounted by heavy galvanized pipe railings four feet high. A two-foot walkway is provided directly alongside each ramp, cantilevered from the ramp proper, for the convenience of men moving from floor to floor.



Left—Easy, Cleated Ramps Are Provided for Moving the Stock from Floor to Floor. Below—Looking Over the Pennsylvania's Tracks Through the Light and Ventilation Well of the Building

The stock ramps are supplemented by the five-ton freight elevator provided near the southeast corner of the building, but this elevator, as before noted, is used only when handling small shipments of stock, and then only when it is more convenient than the ramps.

All Pens Drained and Watered

All floors in the building are of reinforced concrete flat-slab construction, 8 in. thick, and are given a suitable pitch in different directions for quick drainage by means of a separate lean concrete course directly on top of them, ranging in thickness from about 2 in. to 6½ in. A two-inch course of dense mortar was provided on top of all floors to absorb wear and to prevent the penetration of moisture, and traps and sewer connections are provided at all low points.

All pens are piped with drinking water, which is supplied from the city mains through a 50,000-gal. storage supply tank on the roof. The tank supply is maintained by two 5-in. by 8-in. double-acting plunger type pumps in the pump room on the third floor. In addition to the drinking water connections to each pen, ¾-in. hose connections are provided at about every third pen for flushing purposes, and four standpipe, fire-hose connections are provided on each floor, two on each of the alleys lengthwise of the building. All of the fire hose connections are provided with reels of hose and are connected directly in a fire alarm and fire fighting water supply system which includes a 500 gal. per min. fire pump in the pump room, and four alarm boxes on each floor.

No artificial heat is provided in the pen areas of the building, so that all water pipes are well insulated, although, owing to the animal heat given off, it is not expected that the winter temperature within the building will be anywhere near as low as that outside. In the case of the watering trough supply lines, the insulation extends only to a point on each down-comer out of reach of the livestock. To prevent possible freezing in these exposed lengths of line, shut-off valves are provided above the exposed sections, and the exposed lengths are made to drain automatically.

Artificial lighting of the building is by means of electric lights suspended from the ceiling, individual lights being provided for each large pen or group of small pens, and in rows directly over the alleys. All of the lights are provided with vapor-proof globes, and each of the pen lights is controlled separately by a switch directly outside the pen. The lights over each alley, on the other hand, are all controlled together through switches provided at each end of each alley.

Pen and Feed Trough Construction

The pens throughout the building are all constructed of long leaf yellow pine, but vary in size and height and in the sizes of material used, with the class and number of head of stock to be housed in them. In general, the pens for large cattle are about 6 ft. high and are constructed of 3-in. by 12-in. side pieces and 6-in. by 6-in. posts; those for sheep and calves are generally about 4 ft. 9 in. high and are made up with 2-in. by 6-in. siding and with either 6-in. by 6-in. or 4-in. by 6-in. posts; while the pens for hogs exclusively are about 4 ft. high and are made up generally with 8-in. by 8-in. posts, and siding ranging from 3-in. by 6-in. to 3-in. by 10-in., the wider pieces being used near the bottom. In the case of the latter pens, or any of the combination pens where hogs are housed, all edges of sliding pieces are covered with galvanized iron to prevent destruction by chewing or gnawing.

All gates are supported by two strap hinges attached to the concrete columns of the building, or, in the case of some of the lighter gates, to timber posts, fixed in

position to the floor and extending to the ceiling. The weight of the outer ends of the gates is in each case supported by a turnbuckle rod which extends back to the top of the high hinge post provided. All gates are equipped with locks to prevent the stealing or unauthorized movement of stock.

The hay racks in the pens for large cattle are of the usual wooden slat, "V" type, in sections from 8 ft. to 10 ft. long, but they are hinged to the wall or pen timbers along the bottom and hang open at the top, supported by lengths of chain at each end. Through this arrangement, the racks are collapsible and will not bruise or otherwise injure cattle coming in contact with them.

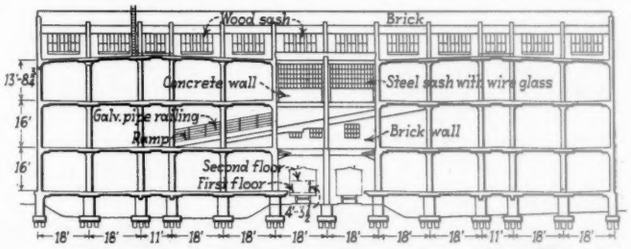
The pens for sheep and calves, in addition to having hay racks similar to those in the large cattle pens, but somewhat lower, are provided with timber feed troughs, about four inches deep, set directly beneath the hay racks and raised about four inches above the floor to permit cleaning beneath them. In all pens where hogs are quartered, the feed troughs are of concrete, or of timber construction with all exposed edges covered with galvanized sheet metal.

Several Types of Water Troughs Provided

Three types of water troughs are provided in the building; a galvanized steel trough, semi-circular in section, 10 in. deep and set about 24 in. above the floor, where large cattle alone are quartered; a similar type trough, but only 6 in. deep and set low on the floor, where the pens are intended solely for the quartering of sheep and calves; and a low concrete trough, 6 in. deep, employed in all pens used for hogs alone, or for either hogs or calves and sheep. In the case of the metal troughs, each pen has an individual trough, but, wherever possible in the case of the concrete troughs, the trough is made to serve two pens by locating half of its width on each side of the fence separating the pens. However, in the case of the metal troughs, the troughs of adjacent pens were placed close together, in so far as this was possible, to minimize the amount of piping necessary.

All troughs are equipped with float valves and overflow pipes so that the water supply is maintained automatically. The only time when it may become necessary to control the flow of water to the troughs manually through the hand valves provided in each supply line, is during unusually cold weather when there is fear of the water freezing in the uninsulated sections of the supply lines near the troughs, within reach of the stock.

Where unrestricted watering of the stock is permitted, as for example on the third floor generally where the stock is held for the abattoirs, the troughs are uncovered, except in the case of the concrete hog troughs, which are provided with open-paneled hinged covers, constructed of wood with sheet metal protection. These covers permit free access to the water but make it impossible for the hogs to get into the troughs. On the first and second floors of the building in those pens where it is desired that the stock be watered only at specific times, all three types of troughs are provided with continuous wood covers, which are hinged to the wall or fence so that they can be raised and lowered readily by the stock attendants.



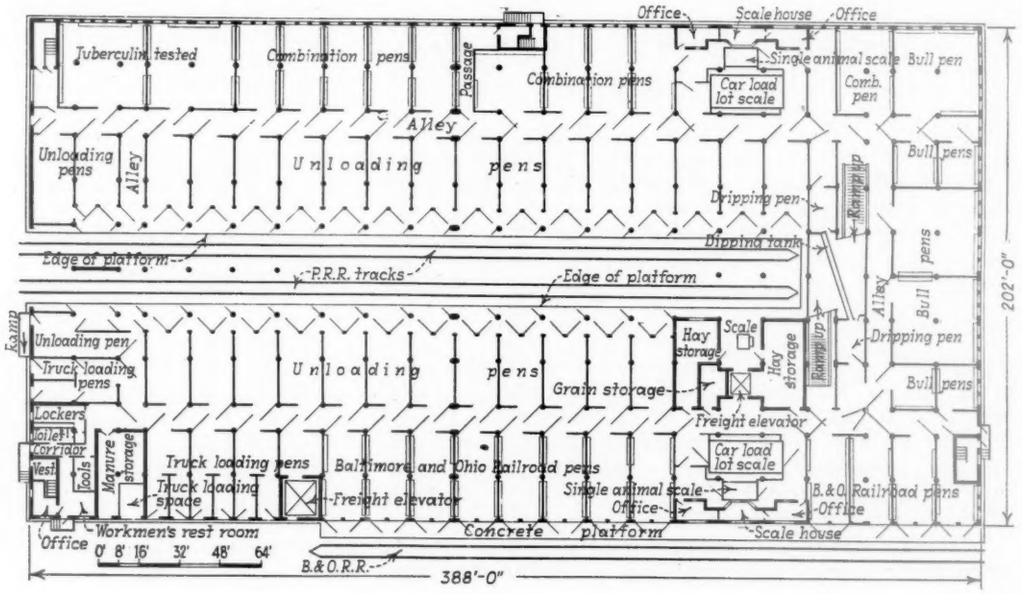
A Section Through the Stock Building, Near the South End, Looking South

Rodent-Proof Feed Storage Provided

Many features in the design and operation of the stock pen building are intended to make it sanitary and free from rodents. In the first place, all pens in use are swept daily, and they are flushed and scrubbed with water as this may become necessary. All manure is carted to the bin provided at the southeast corner of each floor.

The manure bins are located directly above one another and are connected by a metal chute with a bottom opening of suitable height to discharge directly into wagons or trucks backed into the building on the driveway level. Through this arrangement, the manure is handled economically and no very large quantity is allowed to accumulate in the building.

Of equal effectiveness in the matter of keeping the



General Plan of the First Floor, Showing the Track and Pen Layout

building free from rodents, and also from the standpoint of efficient operation, are the type and location of the hay and grain storage rooms provided on each floor. These rooms, which include two for hay and one for grain, are grouped together on each floor directly about the 6,000-lb. capacity freight elevator near the north end of the building. On the second and third floors, where the facilities are exactly similar, the hay storage rooms are 35 ft. long by 17 ft. wide and are separated by the elevator shaft and the room, 19 ft. by 17 ft., provided for grain storage.

The hay storage rooms on the first floor lie directly beneath those on the above floors, and are of the same size, except that a portion of one of the rooms is partitioned off for grain storage. In the space directly below the position of the grain rooms on the upper floors, which fronts on the Pennsylvania's tracks within the building, a platform scale of 4,000 lb. capacity is provided for weighing the feed as it is brought in.

The most unusual feature of the storage rooms is their construction, which precludes the possibility of their becoming infested with rats. They have concrete floors, and the walls to a height of seven feet are constructed of glazed tile, with close-fitting metal doors. Above the tile walls, and extending to the ceiling, all of the rooms are enclosed with heavy-gage, ½-in. galvanized mesh.

The new stock pen building, which replaces open pen facilities vacated to make room for the construction of the Pennsylvania's new passenger station at Philadelphia, was designed and constructed under the direction of E. B. Temple, chief engineer Eastern region of the Pennsylvania, assisted by W. H. Cookman, architect, and C. W. Thorn, engineer of construction, who was in direct charge of erection. The building was constructed under contract by the Turner Construction Company of New York and Philadelphia.

The stock pen facilities are being operated under lease by the West Philadelphia Stock Yard Company, of which Jos. H. Harlan is president. The abattoir constructed at the new meat center at the same time as the stock pen building, is owned and operated by the Philadelphia Abattoir Company and the Consolidated Dressed Beef Company, while the large pork packing plant constructed is owned and operated by F. G. Vogt & Sons, Inc.

Railways and Economic Recovery

(Continued from page 77)

because of their short-sighted selfishness, are doing and will do all they can to prevent the physical and financial rehabilitation of the railroads, as they have done all they could to create the need for that rehabilitation, but if their ignorance and greed is allowed to continue to dictate the transportation policy of this country, the condition of the railroads will be a drag upon economic recovery which it will be extremely difficult, if not impossible, to overcome, and it will inevitably result in government ownership. Under government operation the employees of the railways would be added to the great army of government employees who are already so largely dictating our public policies, and the huge deficit incurred would be added to the burden of taxes which already is breaking the back of the American taxpayer.

Viewed from every political and economic standpoint the transportation problem is one of the most important with which the American people are confronted, and they can solve it in only one way. That is, by removing the government shackles from railroad managements, establishing equality of opportunity between the railroads and other means of transportation, and giving private capital and private management full opportunity to rehabilitate the railroad industry.

Freight Car Loading

WASHINGTON, D. C.

REVENUE freight car loading dropped again in the week ended July 2 to 489,273 cars, which was 9,526 cars less than the total for the week before. This was also a reduction of 178,357 cars as compared with the corresponding week of last year and of 302,780 cars as compared with 1930. Loading of grain and grain products and ore picked up as compared with the week before but there were decreases all along the line as to other commodities. The summary, as compiled by the Car Service Division of the American Railway Association, follows:

Revenue Freight Car Loading

Week Ended Saturday, July 2, 1932

Districts	1932	1931	1930
Eastern	112,539	145,984	173,240
Allegheny	93,442	129,062	161,416
Pocahontas	28,571	41,146	41,930
Southern	72,294	93,111	105,275
Northwestern	63,329	90,684	122,695
Central Western	79,521	111,528	122,837
Southwestern	40,577	56,115	64,660
Total Western Districts	182,427	258,327	310,192
Total All Roads	489,273	667,630	792,053
Commodities			
Grain and Grain Products	30,338	47,675	48,205
Live Stock	13,723	14,788	16,694
Coal	67,230	100,939	109,659
Coke	3,033	4,576	8,555
Forest Products	15,420	24,782	36,377
Ore	5,111	29,919	56,033
Merchandise L. C. L.	171,313	188,387	204,837
Miscellaneous	183,105	256,564	311,693
July 2	489,273	667,630	792,053
June 25	498,799	759,363	936,690
June 18	518,409	739,094	920,645
June 11	501,760	732,409	926,066
June 4	447,387	761,084	935,582
Cumulative total	14,112,144	19,020,483	23,216,874

Car Loading in Canada

Car loadings in Canada for the week ended July 2 amounted to 36,272 cars which was a decrease from the previous week's loadings of 3,030 cars, but after adjustments were made for the holiday (July 1) the index number rose from 62.14 to 66.77.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada		
July 2, 1932	36,272	15,784
June 25, 1932	39,302	16,943
June 18, 1932	44,736	18,065
June 27, 1931	50,398	23,604
Cumulative Totals for Canada		
July 2, 1932	1,075,129	529,196
June 27, 1931	1,258,940	713,962
June 28, 1930	1,530,864	921,012

THE DELAWARE, LACKAWANNA & WESTERN has recently extended to Buffalo, N. Y., Ithaca, Syracuse, Utica, Cortland and Norwich the over-night freight service which it had previously offered between greater New York and metropolitan New Jersey points and Scranton, Pa., Binghamton, N. Y., and Elmira. Under the new plan, freight is accepted at New York piers up to 3.30 p.m., eastern standard time, for placement at Buffalo not later than 9 a.m. the next morning. Times of acceptance at other metropolitan points and of delivery at upstate destinations are arranged on a corresponding schedule.

Communications . . .

Advocates More Advertising

To the Editor:

Advertising the railroads should be uppermost in the minds of their officers in order to increase their business.

At a meeting which the writer attended, in which many ways for increasing railroad business were discussed, it was brought out by several speakers that the country's industrial leaders and citizens should be brought to realize the importance of railroad prosperity to the economic welfare of the nation.

It was brought out that much of the money deposited in banks and insurance companies is invested in railroad securities. Very well. What are the railroads doing for their investors? Giving them the best transportation service possible, no doubt, both passenger and freight. But do the public and investors realize it? Aren't they too much inclined to take it for granted? And then turn around and give their business to a trucking concern because they can get cheaper initial costs there. Possibly they don't look far enough to see the increase in taxes on gasoline and other items which, directly or indirectly, are made necessary by trucks and buses securing business which should be given to the railroads, and using the public highways as a right-of-way. In any case it is up to the railroads to tell the people, of the railroads' superior service and how they can help themselves by helping the railroads.

How do automobile manufacturers manage to get business? They don't sit back and think only of cutting expenses. Cutting expenses will help to meet decreased revenues but will not help to increase revenues. They don't sit back and say, "Well, now we have cut expenses, and if people only knew how good our product is, and buy from us, we would be able to show a profit." They don't do that. They get right out and tell the millions of people how good their product is, how far superior it is to any other on the market. They can only do it by spending thousands and thousands of dollars on advertising. They have their salesmen doing their part, but they realize that the salesmen could not hope to reach the millions of people that are reached through national periodicals and newspapers. If this advertising didn't bring returns, and pay for itself, they would not, and certainly could not afford to spend all this money on advertising.

Another example is the bus and trucking companies. They don't sit down and say, "Well everybody knows we offer cheaper rates both on passenger and freight transportation. If they don't come in and use our facilities then that is their hard luck." Motor transportation companies advertise extensively. They know their business comes from people who are kept in touch with motor transportation developments and rates. One advertisement in a newspaper tells that a certain bus company has installed porters in its buses, and the service one can receive when riding the buses of this concern. What is the matter with railroad porter service? Railroads have had porters and efficient personal service for many years before the beginning of motor transportation. The many little things like that are the ones that make good business. And those things must be kept in the minds of the public. Not just an uninteresting formal announcement once or twice when some new service is inaugurated. Let them know that you are in business for their service and welfare. Keep it always before them and don't allow them to forget it.

Glance through the newspapers any time, and notice some of the advertisements. Manufacturers who have been in business for a quarter-century or more, have large ads every day. Most everyone knows the product is good, yet the manufacturer knows he must keep telling them or they are likely to become indifferent and forgetful. The same principle applies to merchandising concerns and department stores. Everyone knows that he can go to a department store and purchase anything, from a toothbrush to a complete line of house furnishings, yet the store knows that it pays to advertise.

If the railroads would form an association whose task it was to inform the people of this country that the welfare of the railroads depends on the people, and that much of the welfare of the people depends on the prosperity of the railroads, then all railroads would benefit. Let them advertise the industry in general; not just one road or system, but all of them. Have them advertise the comfort and safety of traveling by rail, and the security and eventual economy of shipping by rail. Then while the association was doing this, the individual roads could advertise their own service to get as much of the railroad business as they could.

John W. Ebel, Jr.

Capital for Railway Needs from Public Subscription Fund

New York.

To the Editor:

Current reports of earnings continue to expose the desperate plight of the railroad industry. The government aid now being extended cannot last indefinitely. In the end, the public itself must rescue the roads for no other known means can supply the transportation afforded by them.

It is increasingly obvious that present conditions in the transportation field cannot continue indefinitely. A much greater degree of co-operation is necessary in order to eliminate competition that has brought serious losses. We have spent billions of dollars for hard-surfaced highways that will be pounded to pieces before the public obligations issued to pay for them have been discharged. The motor vehicles that now move traffic over these roads at less than actual cost some day will have no highway over which they can operate on this basis. But it is doubtful whether the railroad industry can survive under private ownership and operation until the problem is solved in this drastic manner. The railroads cannot function privately unless they have sufficient earnings to permit them to maintain their working capital position, in order to sustain their credit and enable them to meet maturing obligations.

The outstanding need to bring about an additional demand for goods and services and so bring about an increase in business and more traffic for the railroads, is to engage in an important work of construction that would result in a demand for steel and other basic products. Until this improvement shall come about, many of our railroads must continue to look to some source other than earnings in order to maintain their working capital and from time to time be able to meet maturing obligations. Just at present this aid is coming through government channels. This is fundamentally unsound, as it is a case of the government supporting the people instead of the people supporting the government. It cannot be permitted to continue.

Since the railroads must be kept in operation and must be financed, private and not public means should be employed, as the people must foot the bill in the end. If the capital be procured from public sources, it must be raised by additional taxes —difficult to provide for on an equitable basis, difficult to assess and difficult to collect. At present, railroad obligations cannot be marketed through the usual channels. A wholesale reduction in the investment account resulting in lower fixed charges could be brought about by receivership and reorganization that would enable the roads to meet their fixed charges and continue to function. But this would carry down savings banks, trustees, insurance companies and other such institutions in the general debacle. The alternative is for the public to come directly to the rescue of the railroads with the necessary funds.

Solution of Railroad Problem

Within the next few years we shall see the solution of the railroad problem either with the continuation of private ownership and operation on a basis that will enable the roads to function with a fair return on the investment, or else we shall

have government ownership with either public or private operation. If the railroads are to function under private ownership and operation with a fair return, holders of railroad obligations will continue to receive their interest regularly and maturities will be met. If we are to have government ownership, the federal government must exchange its obligations for those of the railroads. We may assume that the federal government would not default. In either event, then, whether we have private ownership or public ownership, the holders of railroad securities purchased at present prices would be protected.

There are between eleven and twelve billion dollars principal amount of railroad obligations outstanding in the hands of the public and the present value of carrier property probably is over $25,000,000,000. Is it not obvious that the equity is far in excess of the present market value of all the outstanding securities? Does it not follow that purchasers of railroad obligations at present prices are reasonably protected? In proportion to the probable reward, is it not clear that the risk assumed is small indeed? On the other hand, unless the public come directly to the rescue of the railroads and they should be allowed to drift into public ownership, which many believe may be the result of a continuation of the present policy, we may be called upon to bear a far more difficult burden.

The railroads are borrowing money from the government and giving mortgage bonds as collateral. Unless they can repay these loans, the remedy for the government is to take over the roads. It is well known that certain persons high in public office are working for this very end. The danger seems greater than ever before in our history. There is grave doubt of the wisdom of embarking on a policy of public ownership of the railroads in this country, with its democratic form of government. Even in a monarchy, it is less efficient than private ownership and operation.

Subscription Fund

Although the general public has a vast stake in the financial welfare of the railroads, both because of the need of adequate transportation and because of ownership of railroad obligations by savings banks, insurance companies and other fiduciary institutions, something more direct seems to be necessary in order to arouse public action in this respect. The necessity of safeguarding the railroad industry must be brought home to the public through pressure on the public authorities. Now, the one thing that can put the fear of God into the hearts of the politicians is: VOTES! If they can be impressed with the fact that the people as a whole do not desire to experiment with government ownership, it is highly probable that this desire would be respected. Under a plan of subscription to a fund to be invested in railroad securities, by means of which thousands of voters would become directly interested in bringing about better conditions in the transportation field, the result would be a powerful weapon in dealing with the political authorities in procuring necessary franchises and also legislation, both state and federal, regarding motor vehicle and other competition with the railroads.

The power to bring about improved conditions resides in the people themselves. It cannot be done by government. A beginning must be made somewhere. Let it begin in some part of the community that stands most in need of improved facilities locally, and to bring about which would give useful employment to thousands of persons and a large amount of capital, plenty of which awaits employment. This would be a good time, for example, to undertake the construction of the railroad tunnel between Long Island and the mainland west of the Hudson river so long and so badly needed.

This program is no philanthropy on the part of those who may join in the undertaking. In the long view, it is sound business. It is something that ought to be done and there is no better time to begin—with low costs in all departments. The truest common sense is courageous action that will give constructive work where it is much needed. Better times will come. Present prices for railroad securities are not warranted by the facts. There are good, substantial reasons to believe that the subscribers to the proposed fund would be handsomely rewarded. No real sacrifice is imposed. The risk is small and the probability of gain is great for all who participate.

JOHN E. WHITE.

Southern Pacific Coach Equipment Vastly Improved

SAN FRANCISCO, CAL.

TO THE EDITOR:

Referring to the letter from Barrington Ward in your June 4 issue, which expresses the view that the railroads, in the matter of coach equipment and facilities, have not kept pace with the Pullman Company in initiating improvements in lounge and rest room facilities, so far as concerns the comforts of transcontinental passengers:

During the past five years the Southern Pacific has given much study and thought to improvements of this nature. All new coach equipment placed in service during this period contains many improvements; in fact, the Southern Pacific has been constantly on the alert for new ideas and suggestions, many of which have been adopted. The comfort and convenience of the long-distance traveler are always uppermost in the minds of the company.

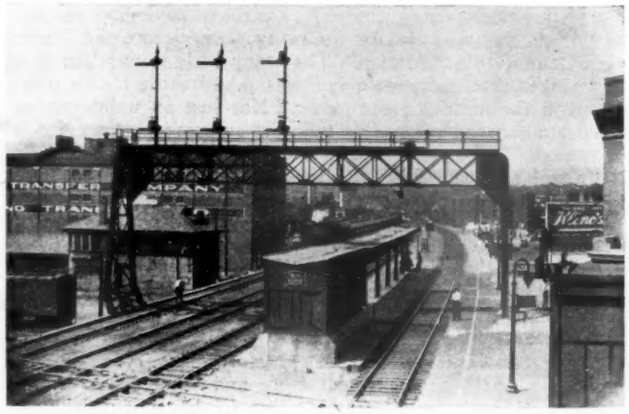
Some two years ago we purchased a number of reclining chair cars, which are equipped with large dressing and lounging rooms similar to those in the latest types of Pullman sleepers. The room for men is large enough to accommodate from six to eight passengers, and the one for women is equally large; in fact, the latter is more commodious than similar rooms in many sleeping cars. For the special convenience of women travelers, their room contains a mirror and a table and chair. Both rest rooms have porcelain wash basins and roomy toilets. The new coach equipment has been modernized with respect to decoration, and the upholstery and interior finish have been harmoniously blended. As a rule, light colors have been adopted and care has been used to select attractive trimmings, particularly in the case of electric fans and lighting fixtures. The chairs are of the adjustable type, which materially adds to the comfort of the traveler.

Although this new equipment was originally operated in Southern Pacific local service between Los Angeles and Portland, San Francisco and Portland, and San Francisco and Ogden, the cars are now being operated on the San Francisco Overland Limited between San Francisco and Chicago, thus providing a splendid chair car service for through passengers. This means that a coach passenger in this instance has the benefit of the 61-hr. schedule. Similar expedited service is provided on the Golden State Limited between Los Angeles and Kansas City. These new coaches are also operated in the Sunset Limited between Los Angeles and New Orleans.

The Southern Pacific and other railroads realize the importance of catering to the wishes of passengers desiring to travel in coaches, and are making every effort to provide the highest possible type of accommodations.

F. S. MCGINNIS,
Vice-President, System Passenger Traffic,
Southern Pacific.

* * *



Looking West on the Chicago, Rock Island & Pacific, at the Joliet, Ill., Union Station

Odds and Ends . . .

An Ingenious Australian

R. A. Holloway, principal assistant engineer, power and mechanical branch, in the organization of the Transport Commissioners of New South Wales, Australia, saw our item sometime back in which we asked our readers to tell us about instances in which rough and ready first aid to broken down trains was successful in enabling them to continue with out help. Mr. Holloway supplies us with a good story in this connection. "Recently," he says, "on a gasoline-driven rail motor car belonging to the New South Wales Government Railways, a cap on the carburetor came unscrewed and was lost. The driver, with commendable initiative, used a crimped bottle cap to effect a temporary repair and brought his car home with but a few minutes' delay."

Super-Smooth Handling

There are proud smiles these days on the faces of the train and engine service employees of the Baltimore & Ohio around Akron Junction, Ohio. They recently demonstrated in a startling way their ability to handle trains—even of coal cars—smoothly. It seems that a car of coal was placed in the siding of the M. A. Knight Company, about three miles from Akron Junction. While the car was being unloaded, an employee of the company removed his spectacles and placed them on the top of the car. During the process of the car's unloading, he forgot all about them, and before he discovered his loss the car had been switched to Akron Junction and placed in Hill Yard preparatory to further movement. There the glasses were found intact, on top of the car, and they had not even shifted their position.

Anyway, Birds Still Like Train Travel

The Mobile & Ohio has a local passenger train, which makes two daily roundtrips between Starkville, Miss., and Artesia, one in the morning and the other in the afternoon. Lately it has enjoyed the patronage of some highly regular passengers. It seems that a mother sparrow thought the rear end of the passenger coach was a fine place to build a nest and raise a family, which she did in the intervals when the train was parked between trips at Starkville. The sparrow became familiar with the schedule of the train and adapted herself to it, working at the nest building while the coach was in the yard and remaining in a nearby tree until the train returned to Starkville. Eventually she hatched out three young sparrows, which she cared for at times when the train was in the Starkville yard. She never made a trip with the train but was always on hand when it appeared. The youngsters, of course, had the benefit of constant travel—they covered 44 miles every day—and it is a tribute to the Mobile & Ohio's service that not once did they complain of the way in which they were accommodated.

Scorn for a Veteran

Should a man who has successfully held down a responsible job for many years be proud or ashamed of his record? Most people, we believe, consider such a record to be praise-worthy, but there is at least one Pullman porter who thinks differently. His point of view was made plain to A. H. Babcock, electrical engineer of the Southern Pacific, when Mr. Babcock was a passenger on a transcontinental train some years ago. A veteran Pullman conductor, with six service stripes on his sleeve, passed through the car. An inquiring woman passenger asked the porter, who was standing nearby, what the stripes meant. The porter informed her.

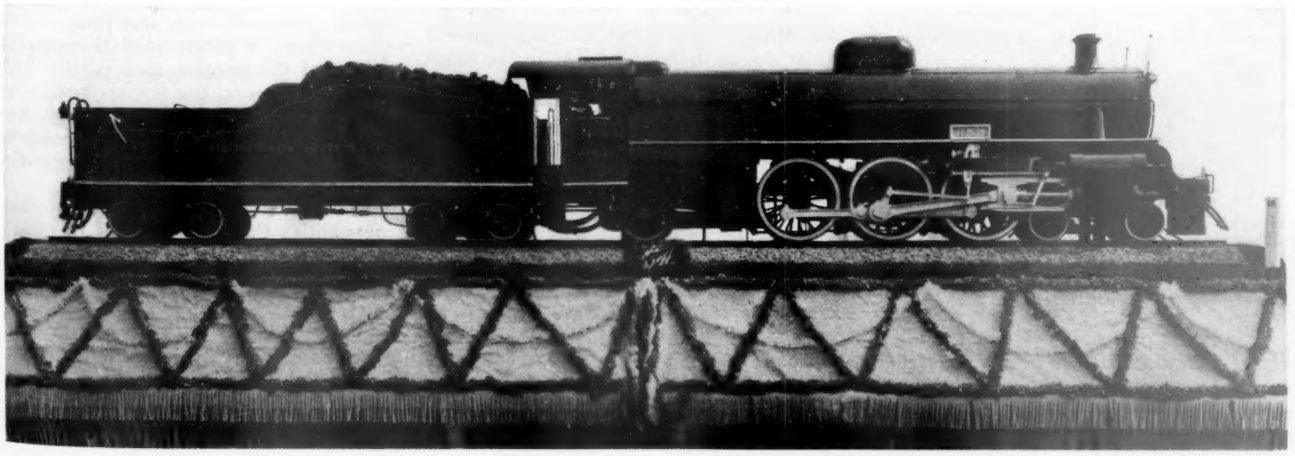
"Do you mean to tell me that that man has been a Pullman conductor for more than 30 years?" asked the woman in astonishment.

"Yes, Ma'am," replied the porter, "and a white man at that!"

And the scornful tones with which he spoke were eloquent, according to Mr. Babcock.

D. & H. Parades Model Locomotive

As a part of the celebration of the dedication of the Port of Albany, N. Y., the Delaware & Hudson provided a float, exhibiting a model of its locomotive No. 653 complete with tender. The model was fabricated and assembled in the car department, of all places, and was exactly one-third the size of the original. The boiler jacket, dome, cylinder casing and reservoir shield were of sheet metal construction, while the other parts were largely of wood. The job of building the model called for skilled workmanship, since the machinery available was not suitable for turning out the small parts necessary. Consequently, such details as the motion work, dome springs, wheels, etc., required shaping by hand. As is the case with this stream-line design of locomotive, the whistle and bell were concealed. However, the distinctive sound of the steam chime whistle on the original No. 653 was cleverly reproduced by an air-operated whistle. This feature, together with the ringing of a concealed bell, received more than passing attention.



Model of D. & H. Passenger Locomotive, Constructed by Car Department, which was a Feature of Albany Port Celebration

NEWS

U. S. and Canadian Regulation Contrasted

Woodlock finds latter marked by realistic approach in prejudice cases

Thomas F. Woodlock, former interstate commerce commissioner and now contributing editor of the Wall Street Journal, writing in a recent issue of that paper under the title "How to Regulate," cites a recent decision of the Board of Railway Commissioners of Canada to illustrate "the difference between the thought of that Board and the thought of our own Interstate Commerce Commission upon a very fundamental point—that of the bearing of competition upon the question of unjust discrimination and undue prejudice."

Excerpts from Mr. Woodlock's comment follow:

"In April of this year the Canadian Pacific and the Canadian National published lake and rail rates on grain and grain products from the head of the lakes to destinations in Ontario, Quebec and the Maritime Provinces, in order to meet competition of all-water routes. Ontario millers complained that these rates were discriminatory in that they preferred millers shipping from the head of the lakes. The differential on export grain in favor of the western mills was 4 cents to the Montreal group and 7 to 9 cents to the Maritime Provinces' group. Lake-and-rail rates were 5 and 6 cents above lake rate, but were low enough to share the business by reason of better service. The complaining Ontario millers admitted the fact of water competition, but insisted that this was not an answer to the charge of discrimination and demanded suspension of the rates.

"The Board dismissed the complaint pointing out that no advantage would result to complainants if the rates were suspended, seeing that the traffic would move all-water, water rates not being under control, and that there was dissimilarity of conditions as regards the points alleged to be perfected and those alleging discrimination. Which is, of course, the commonest kind of common sense. The very concept of discrimination must rest upon assumed similarity of conditions at the points concerned and the existence of competition at one point destroys that similarity, as it also does in the case of undue prejudice or preference.

"Until recently this principle was followed by our own Interstate Commerce Commission in dealing with Section 3 of the Act. But in the *Duluth Chamber of Commerce case,* decided a few years ago, it was directly breached. In that case Duluth complained that the Chicago & North Western permitted concentration of dairy products from points in South Dakota shipping to Chicago while refusing that privilege to the same points on shipments to Duluth. It was shown that some of the points were served exclusively by Chicago & North Western while others were served by other lines reaching Chicago but not reaching Duluth. At these latter points there was competition, but there was none at points local to the North Western's lines. Yet the Commission found the North Western guilty of prejudice at all the points—competitive as well as local—and ordered its removal.

"Curiously, for some unknown reason, the carrier did not choose to contest the case in the courts, which is greatly to be regretted, seeing the fundamental departure from principle involved in the finding and order. That order virtually nullified the entire theory of Section 3.

"It is worth noting that the Transportation Act as it stands differs in letter and spirit from the law and the practice prevailing in Canada with respect to the 'long and short haul' situation. Section 4 of the Act in this country is in effect merely an expression of a special situation under Section 3. Canada has a 'long and short haul' clause but in practice it is merely necessary to show the existence of competition to render it inoperative. There is no 'equidistant clause' and no restriction upon rates made to meet water competition, whereas in this country attempts to make the prohibition absolute recur at regular intervals.

"Moreover, the 'equidistant clause' is wholly illogical in principle and the clause respecting rates reduced to meet water competition is subject to the same defect. The entire spirit of Section 4 reeks of the same thing, in that it reflects a fundamental misunderstanding of the principles of equity that underlie the whole matter. For this the famous 'Intermountain' controversy over Pacific Coast rates is no doubt responsible.

"Congress (and for that matter the Interstate Commerce Commission) has seemed to want something that is neither a fully 'national' system of transportation, in the sense of one single railroad system, nor a fully 'competitive' group of individual railroads. The commission's construction of the consolidation provisions of the law on the one hand and its recent construction of Section 3 on the other illustrate this attempt to create a 'hybrid.'"

Pollard Champions Employee Leagues

C. of Ga. executive says associations aid taxpayers and private motorists

H. D. Pollard, president and general manager of the Central of Georgia, in an advertisement appearing in newspapers in that company's territory, has explained the aims and purposes of the railway employees' and taxpayers' associations which are now organized, or are being organized, in many states. His statement reads in part as follows:

"A great and significant movement for the public welfare is the formation throughout the country of voluntary organizations of railway employees to interest themselves in public affairs. Its results will be protection of tax monies, preservation of highways, and the safeguarding of persons and property on those highways. With such purposes the movement deserves and is receiving support and co-operation from the general public, indeed in many states taxpayers, not employed by the railroads, are joining such organizations.

"There is no secrecy about these associations of railway employees. Their meetings are open, their aims and objects are made known to all. They seek only that which is their right and which is to their own best interests—equitable treatment by governmental authority, and a square deal for the railroads. Given this the railway industry will improve, and along with it will come direct benefits to the whole people.

"Heavy and high-speed motor vehicles operated for individual profit are destroying the highways, built by tax money, and are depleting public treasuries. Such vehicles also threaten the safety of the private user of the highways. Moreover, the private automobilist pays an entirely disproportionate share of the cost of highway construction and maintenance through gasoline and tag taxes.

"In asking for the removal of these inequalities the organizations of railway employees are doing a public service.

St. Lawrence Waterway Terms Settled

Terms of a treaty between the United States and Canada relating to the construction of the Great Lakes-St. Lawrence seaway were finally settled on July 12, after a long period of negotiations, according to an announcement from the White House on July 13.

Employees in N. J. To Meet on July 17

Will gather at R. R. Y. M. C. A. at Hoboken to lay plans to protect their jobs

A mass meeting of New Jersey railroad employees and others friendly to their point of view, has been called to be held at the Lackawanna Railroad Y. M. C. A., Hoboken, at 3 p. m., daylight saving time, on July 17.

Initiative in calling the meeting was taken by the Lackawanna Veterans Association under the leadership of its officers, John Draney, J. W. O'Neill, and E. J. Foley, and invitations have been issued to all railway employees and kindred interests throughout the state. Assisting the organizers in their work is James V. Yarnall, publicist, of New York.

It is planned to organize a state association of these interests at this meeting similar to the railway employees' and taxpayers' associations in other states. A considerable number of organizations outside the railway field have signified their intention to support the movement, among them representatives of local truck operators who feel the competition of over-the-road trucks as keenly as do the railways.

The recent session of the New Jersey state legislature not only failed to enact any legislation bringing motor trucks under regulation and increasing their taxes, but it actually extended license reciprocity to trucks from outside the state, thereby reducing its revenues from this source by approximately $300,000 per annum.

Taxation of motor trucks in New Jersey is notoriously low, the state ranking forty-third in the list of states in this respect. Moreover, it has followed an extremely ambitious highway construction program, believed by many to be beyond either the needs of the citizens or their capacity to pay. Total highway expenditures in the state were almost 114 millions in 1930, of which less than $27,000,000 was received from motor vehicle taxation. Whereas truck taxation in the state is absurdly low, real estate taxation is correspondingly high and the railroads are, of course, heavy contributors on this score.

It is to educate the public regarding these conditions and to work for their correction that the new association will devote its efforts.

N. Y. C. Offers Five-Day Week to Clerks

The New York Central is offering to its clerical forces a five-day week in lieu of a plan to reduce forces in order to meet current conditions. The five-day week plan is being instituted only where it is acceptable to the workers involved and since it has been rejected by members of the Brotherhood of Railway Clerks, some reduction in forces among these organized employees is expected.

West Virginia Buses May Now Carry Mail

Over protests of the Norfolk & Western, the Virginian, the Chesapeake & Ohio, the New York Central and the Railway Express Agency, the State Road Commission of West Virginia recently entered an order permitting highway passenger buses operating under its jurisdiction to carry packages up to 50 lbs. weight, newspapers and United States mail. The order was entered upon petition of the West Virginia Motor Transportation Association.

I. C. C. To Investigate Pennsylvania Class Rates

An investigation as to the effect on interstate commerce of the class rate basis ordered by the Pennsylvania Public Service Commission for intrastate traffic which is lower than the basis prescribed by the Interstate Commerce Commission for like distances in interstate commerce has been ordered by the federal commission on petition of the railroads. The case has been assigned for hearing at Harrisburg on July 28 before Examiner Hosmer.

N.Y. Delivery Service Planned for Sept. 15

Carload non-perishable freight will be handled for an additional charge

After two and one-half years of more or less continuous agitation from shipping interests and study by railroad committees the carriers serving New York plan on September 15 to inaugurate optional collection and delivery services for carload non-perishable freight moving from and to points in the New York City boroughs of Manhattan, Bronx, Brooklyn and Queens, and points in New Jersey in the New York Metropolitan district. Charges in addition to the rail rate will be assessed for the pick-up and delivery and will be published in a single agency tariff to be issued for the account of all participating roads.

It is not known at this time whether previous proposals to utilize the Railway Express Agency as a trucking medium to serve patrons of all carriers will be adopted since the official announcement of the plan stated that "agencies to be employed for this service will be the subject of later announcement." At a conference with shippers and other interested parties on July 11, when the plan was made public, D. T. Lawrence, vice-chairman of the Traffic Executive Association, Eastern Territory, agreed to receive for consideration from the Merchant Truckmen's Bureau of New York a proposal which representatives of the latter described briefly as a trucking plan which "would accomplish the desired results without disruption of the trucking industry." In asking that the Truckmen's Bureau submit its plan in writing, Mr. Lawrence observed that "if the carriers are to have anything to do with the trucking rates they must have everything to do with them."

Trucking rates proposed by the railroads are as follows:

Where the consolidated freight classification minimum is 36,000 lb. and over,

Unregulated Motor Truck Transportation

"Every large produce market in the country is passing through periods of demoralizing prices, due to unregulated motor truck transportation. These periods occur with such irregularity that they have practically forced the old law of SUPPLY AND DEMAND out of the picture.

"Under the present conditions the problem of maintaining any regular flow of agricultural products from the producer to the consumer is hopeless. There is either a feast or a famine. If it were possible to pass the low price, prevailing on any market, due to heavy unexpected motor truck arrivals, on to the consuming public, there might be some redeeming features to this picture; however, this is usually impossible as the product forced on to the market suddenly and unexpectedly usually deteriorates before it can pass through the channels of consumption even at prices far below the cost of production. The next day these unregulated trucks bury some other market with an avalanche of products. As a result, buyers are continually between the 'Devil and the Deep Blue Sea.' They don't dare buy when they can and can't when they want to.

"The Ohio Division of Markets has no criticism to a regulated economic system of motor truck transportation. For over a year we have been continually warning our producers of this situation. We have personally warned our agricultural leaders and the menace is increasing instead of decreasing. The Ohio Division of Markets cannot fight this situation single handed.

"Ohio's produce markets are in the most demoralized condition they have ever been and this condition will grow worse in place of better unless supplies can be regulated in a more orderly manner than at present and this cannot be accomplished unless reasonable and equitable restrictions are placed on our present unregulated system of motor truck transportation."

—From a Bulletin issued by the Ohio State Department of Agriculture, Division of Markets.

six cents per 100 lb.; under 36,000 and down to 30,000 lb., seven cents; to the 24,000-lb. minimum, 10 cents; to the 20,000-lb. minimum, 14 cents; to the 18,000-lb. minimum, 16 cents; to the 14,000-lb. minimum, 18 cents; and to the 10,000-lb. minimum, 20 cents.

Carloads moving under "any quantity" take the 30,000-lb. minimum charges.

Exceptions are provided for news print and flour, which are to be one cent per 100 lb. lower than the general schedules; for paper on skids, waste paper and rags, two cents per 100 lb. higher; for automobiles and empty van bodies, which will take 25 cents per 100 lb. with a $10 minimum; for machinery or packages weighing more than 1,500 lb. each, a minimum of 18 cents per 100 lb.; for silk, 15 cents per 100 lb., with an additional charge of 10 cents per $100 of valuation. Live stock, animals and bulk freight will not be handled.

The foregoing charges will apply in Manhattan, 181st street and south thereof; in the Bronx, 177th street, Tremont avenue and Bronx river and south or west thereof and in Brooklyn within two miles of any contract terminal or railway station or facility to which New York rates apply. In New Jersey the rates will apply within two miles of rail stations in those communities which, in the announcement are "roughly described as stations in the New York suburban area taking New York rates under the decision of the Interstate Commerce Commission in Docket No. 15879 (Eastern Class Rate Case) on traffic to and from points beyond a distance of 100 miles." For movements beyond the prescribed limits of the service a charge of 1½ cents per 100 lbs. per mile or fraction thereof will be assessed. The carriers reserve the right to designate the stations at which the transfer from car to truck will take place except that Brooklyn and Queens traffic heretofore handled through contract terminals will continue to move via such facilities.

The hearing on July 11 was attended mainly by representatives of chambers of commerce and shippers' associations of the various New York City and New Jersey districts involved. There was no protest against the plan as each of the principal participants to the discussion was more particularly concerned with the effect on the interests which he represented.

The present agitation for some form of direct collection and delivery of carload freight in New York City dates from August, 1929, when the Interstate Commerce Commission's decision in the "constructive and off track stations" case was issued. This decision permitted the carriers serving New York to cancel their "constructive" station tariffs and to limit the practice of trucking in lieu of lighterage to interchanges of freight between railroads or between railroads and steamship lines. But, while it found that abuses in the trucking plan existing at the time warranted the cancellation of the tariffs at issue, the commission nevertheless held that "The record is convincing that the carriers should make every effort to avail themselves of truck transportation and co-ordination properly policed on Manhattan Island to the end that expensive pier stations may gradually be discontinued."

The railroad announcement of July 11 also stated that "The matter of effecting corresponding arrangements for the collection and delivery of l.c.l. shipments is under active investigation with a view to making such arrangements effective at the earliest possible date."

The Merchants' Association of New York, in a statement issued on July 12, endorsed the store-door delivery plan but stated that it was yet too early to comment on the rates proposed. The statement follows in part:

"The important thing about this plan is that it actually puts into operation a scheme of delivery which the shippers, the Merchants' Association and other organizations have been advocating for many years and under which the railroads assume full responsibility for shipments to and from the store door accepting bills of lading written accordingly.

"Two important features of the new plan are that it should eventually make it possible to restore many of the piers now occupied by the railroads to their proper function of accommodating seagoing vessels and it will also make it possible for shippers of carload freight to rid themselves of the charges imposed by the organized pier loaders."

W. H. Chandler, manager of the Traffic Bureau of the Merchants' Association, has been one of the leading critics of the railway's failure to act more promptly in this New York situation.

Southern Coal Rate Readjustment Suspended

The Interstate Commerce Commission has suspended from July 11 to February 11, 1933, a general readjustment proposed by the railroads of the rates on bituminous coal between points in the South which would result in numerous increases and reductions.

Investigation of West Virginia Rates Ordered

The Interstate Commerce Commission has added the state of West Virginia to the list of those included in its investigation of the failure of state authorities to authorize or permit increases in intrastate rates similar to those permitted by the federal commission for interstate traffic in Ex Parte 103.

P. R. R. Affiliate Abandons N. J. Bus Route

The Board of Public Utility Commissioners of New Jersey has approved the abandonment of the section of the Pennsylvania Greyhound Transit Company's Browns Mills-Seaside Park, N. J., bus route between Browns Mills and Toms River. Operation between Toms River and Seaside Park will be continued to accommodate rail passengers affected by the abandonment of the Pennsylvania's Island Heights branch.

Testimony in support of the application revealed that the Browns Mills-Toms River bus services were operated in March at a loss of $580 and in April at a deficit of $468.

Number of Employees Again Reduced

A further reduction of 5,066 in the number of railway employees in the service of Class I railways took place between the middle of April and the middle of May, according to the Interstate Commerce Commission's monthly report. The number in May was 1,081,596, a decrease of 19.12 per cent as compared with May of last year.

Reduced Milk Rates in New England

Reductions of 12½ per cent in rates on milk moving from Vermont territory to Boston, Mass., and other New England consuming points will be placed in effect on July 15 by the Central Vermont and the Boston & Maine. The reduced scale, which will be effective for one year, according to Edmund Deschenes, manager of the Central Vermont, is predicated upon a realization by the carriers "that something has to be done to help Vermont dairy farmers retain their profitable southern New England markets."

New Haven Holiday Excursions Well Patronized

Approximately 15,000 persons took advantage of the holiday excursion rates and reduced week-end fares in effect on the New York, New Haven & Hartford over the July 4 week-end. Eight thousand round-trip week-end tickets were sold, the rate for these averaging about 2½ cents a mile; while 5,000 persons were carried on special one-day coach excursions operated from New York to such points as Boston and Springfield, Mass., and Hartford, Meriden, New Haven and Bridgeport, Conn. The week-end excursion from New York to Montreal attracted 1,800 passengers.

Careless Drivers

The Committee on Prevention of Highway Crossing Accidents, Safety Section of the American Railway Association, recently checked traffic passing over a crossing on the Delaware, Lackawanna & Western in New York State and observed that nearly 20 per cent of the passing motor vehicle operators negotiated the crossing in a reckless manner. Between 7 a.m. and 4 p.m. on the day of the check, 275 private automobiles and 102 commercial cars, a total of 377 highway vehicles, passed over the crossing. The Safety Section representatives classified 65 among the drivers of these as reckless.

Vegetable Rates from California Found Not Unreasonable

Complaints filed by the Pacific Coast Vegetable Growers and Shippers Transportation Committee and others attacking the rates on lettuce and other fresh or green vegetables, in carloads, from California and Arizona were dismissed by the Interstate Commerce Commission in a report made public on July 12

with a finding that they are not unreasonable except as to issues relating to refrigeration and top icing charges which were reserved for hearing pending decision in the investigation of charges for protective service to perishable freight.

Reject Lower Rate on Coal to St. Louis

Representatives of the principal railroads serving St. Louis, Mo., from the East, have declined the request of the St. Louis coal operators for a reduction of approximately 50 per cent in freight rates on coal shipped to St. Louis from the inner group of mines in Illinois. Agitation for a reduction in the rate was commenced about two years ago. The present rate is $1.05 a ton, and the coal men wanted this figure reduced to 57½ cents a ton. The competition of highway truckers and the public demand for cheaper grades of coal because of current conditions were given as the principal factors behind the request for the lower rate.

B. & O. Magazine Suspends

Because of "the continued decrease in the business of the company and the consequent necessity for economy in every direction" publication of the Baltimore & Ohio Magazine was suspended with the June issue. The announcement states that the magazine will be issued again when business conditions warrant. Meanwhile the nucleus of the staff, consisting of the editor, associate editor, assistant editor and secretary, will be assigned to other duties, "principally in developing business by solicitation, through contact with the personnel of the road, and by methods similar to those used in the individual business-getting campaign that has been so largely expanded through the magazine."

Ex-Head of Canadian Commission Dies

Hon. H. A. McKeown, former chief commissioner of the Board of Railway Commissioners for Canada, died on July 9 from heart failure at Westfield, N. B. A jurist by profession, Mr. McKeown became chairman of the Railway Board in 1924, resigning on March 1, 1931, owing to ill-health. He was born at St. Stephen, N. B., on November 28, 1863, and was educated primarily in the Collegiate School, Fredericton, N. B., and received his A.B. degree from Mount Allison University in 1881. Subsequently he was granted his LL.B. at Victoria University, Toronto, and entered the practice of law in New Brunswick in 1885.

Pennsylvania Reduces Salaries

Effective July 1, a five per cent reduction was made in the salaries of all officers of the Pennsylvania. This is in addition to two cuts of 10 per cent each made last year, and brings the total reduction in the salaries of officers of the company to approximately 23 per cent.

Also effective July 1, Pennsylvania clerical and supervisory forces have started taking two additional days off each month without pay, making a total of four days a month furlough by these groups, which are now receiving 22 per cent less than their original salaries, after taking all deductions into consideration.

Additional Low Week-End Fares on New Haven

The New York, New Haven & Hartford, effective Friday July 15, placed in effect reduced week-end fares for round-trips between all stations on its lines, and also inaugurated new one-day reduced round-trip fares to New York from all points from Willimantic, Conn., west, from New London, Conn., west, and from Springfield, Mass., Winsted and Canaan, Conn., south.

Both the new week-end tickets and the one-day tickets for New York may be used in either coaches or Pullman cars on any regular trains with the exception of the Yankee Clipper, the Knickerbocker, and the Merchants Limited.

Atlantic States Shippers' Board

A decrease in carloadings of 16.3 per cent as compared with 1931 was forecast for the third quarter by the Atlantic States Shippers' Advisory Board at its recent meeting in New York City. Two estimated increases are included in the report (grain, 3.8 per cent, and chemicals and explosives, 8.8 per cent), while shipments of "other fresh fruits", potatoes and "other fresh vegetables" are expected to be the same as in the third quarter of last year.

Among the anticipated decreases are included: Lumber and forest products, 40.6 per cent; cement, 40 per cent; fertilizer, 35 per cent; gravel, sand and stone, 33.5 per cent; machinery and boilers, 26 per cent; ore and concentrates, 25 per cent; lime and plaster, 22.8 per cent; iron and steel, 20 per cent.

$145,653,540 Advanced to 38 Railroads

From February 2 to June 30 the Reconstruction Finance Corporation had authorized loans amounting to $213,882,724 to 38 railroads (including $10,359,796 to five railroad receivers, and had actually advanced $145,653,540 of the amount, according to its monthly report submitted to Congress. Of this amount $6,166,679 had been repaid, presumably by the Railroad Credit Corporation, leaving $139,486,860 outstanding. The Interstate Commerce Commission up to that date had approved loans of approximately $235,000,000 on applications from 98 roads aggregating over $400,000,000.

Altogether the Finance Corporation had authorized 5,084 separate loans to 4,196 institutions aggregating $1,054,814.

The Senate on July 11 passed a resolution introduced by Senator Couzens providing for the creation of a select committee of five Senators to investigate the loans made by the Reconstruction Finance Corporation and to ascertain any information or facts concerning such loans which the committee deems advisable that the Senate should have. The committee is to report to the Senate in January, 1933, with such recommendations as the committee deems advisable. This was adopted in place of a resolution proposed by Senator Norris to provide for publicity as to loans made by the corporation. Senator Long, of Louisiana, objected to the Couzens resolution on the ground that the confidential information thus made available would give an advantage to the chosen five politicians "to sit on the inside of the chicken coop". The committee as appointed consists of Senators Couzens, Goldsborough, Walcott, Glass and Fletcher.

Reduced Rates for Cattle Shipments in Canada

Reduced freight rates for the movement of livestock in quantities of less than full carloads have been announced by the Canadian Freight Association. In the past a shipper has been required to ship or pay for 20,000 lbs. in the case of cattle and 16,000 lbs. in the case of hogs and sheep in order to ship under the carload rates. The new schedules provide for additional rates subject to minimum weights of 12,000 lbs. and 6,000 lbs. in the case of cattle and 11,000 and 6,000 lbs. in the case of hogs and sheep.

The new rates apply to market centers from points in the prairie provinces within a radius of 200 miles. Cars can be stopped at one intermediate point in transit for completion of a load at a charge of $3 per car. The Canadian Freight Association has undertaken to experiment with these rates for a period of one year.

Southeast Shippers' Board

Decreased car requirements as compared with 1931 for all commodities except cotton, "other fresh vegetables" and textiles are anticipated for the third quarter by the Southeast Shippers' Advisory Board according to its recently-issued forecast of business volume. Textile shipments are expected to be the same as last year, while increased loading of "other fresh vegetables" and cotton are estimated respectively at 12 per cent and 10 per cent.

Estimated decreases, the average anticipated drop being 22 per cent, range from seven per cent on petroleum and products to 60 per cent on crushed stone, sand, gravel and slag. Other expected declines include: Fertilizer and materials, 43 per cent; iron and steel, 40 per cent; domestic fresh fruits, 25 per cent; brick and clay products, furniture and coal and coke, each 20 per cent; pulp, paper and products, 17 per cent.

Recapture Cases Set For Hearing

In the absence of legislation to repeal the recapture clause the Interstate Commerce Commission is proceeding with its program of hearings on tentative recapture reports to which protests have been filed. Twelve additional cases were assigned for hearing last week, bringing the total number assigned for hearings in July, August, September and October up to 26. Most of these cases involve the smaller roads but they also include the Norfolk & Western, on which hearings

were begun some time ago, the Pere Marquette, the Virginian, and several of the United States Steel Corporation roads, such as the Duluth, Missabe & Northern and the Elgin, Joliet & Eastern. Although Congress, in passing the commission's appropriation bill, eliminated $1,183,000 of the amount heretofore devoted to recapture work, in addition to making reductions in other items, the commission has $2,750,000 for this year for valuation work.

U. P. Relief Fund Cares for More Than 3,800 Families

A total of 3,892 families or cases were cared for during the 7½ months ending May 15 by the Union Pacific Railroad employees' emergency relief fund made possible by employees' voluntary contributions of $150,737 for the relief of their unemployed fellow workers. In addition, a total of 158 sick and injured hospital cases of furloughed employees and their families were treated by the Union Pacific hospital department, while 1,498 sick and injured cases, not requiring hospitalization, were also treated. The work performed by the hospital, estimated at $22,920, comprised a total of 1,353 hospital days, 128 surgical operations, 2,631 office visits and 1,286 residence visits. In the handling of the fund, no charges are made for administration, rent, transportation or investigation, all costs of this sort being paid by the company which carries the employees engaged in carrying on the work on the payroll.

Roads Urge Decision in Newsprint Paper Investigation

In a petition signed on behalf of the railroads generally with the Interstate Commerce Commission attention is called to the long period that has elapsed without a report in the investigation of rates on news print paper to points in Official and Southern classification territories and the commission is asked to take judicial notice of the changed financial condition of the railroads since the record was taken. The investigation was instituted by order of July 12, 1928, and a number of separate complaint cases as well as suspension cases involving proposals of the railroads were consolidated with it. The record was closed on November 23, 1929, and briefs were filed on August 1, 1930, but the proposed report has not yet been issued. The railroads in the petition "venture to urge that a course of procedure calculated to eventualize, with as little further delay as practicable, in a decision in this investigation should be adopted and adhered to by the commission."

P. R. R. Plans to Spread Employment

With the object of agreeing upon some plan by which the amount of railroad work at present available may be spread over the maximum possible number of employees, officers of the Pennsylvania met with representatives of the four railroad brotherhoods in Philadelphia, Pa., on July 15. While no specific program had been announced up to the time of going to press, it has been stated unofficially that the company proposes to reduce the maximum employment of conductors, trainmen, enginemen and firemen to 2,900 miles per month, as compared with present monthly maxima of 6,600 miles for conductors, 5,500 miles for trainmen, and from 3,000 to 3,120 miles for enginemen and firemen. About 30,000 of the company's 110,000 employees would be affected. Some opposition to the plan on the part of the employees was considered likely, on the grounds that the agreement for a 10 per cent wage reduction, effective February 1, 1932, provided that there should be no change in working regulations for the period of one year, and that the employees themselves have already done what they could to spread the available employment.

Eastern Presidents Form Traffic Conference

Concurrence of the railroads concerned having been received for the formation of the Presidents' Traffic Conference, Eastern Territory, R. N. Collyer, chairman of the Trunk Line Association, has been named chairman of the new body. The membership of the conference will comprise the presidents of the principal roads in official classification territory.

The step marks the organization of machinery for handling in formal fashion such general rate problems for railroads in New England, Trunk Line, and Central Freight Association territory as heretofore were considered in emergencies by the calling of special gatherings of executives.

Coordinated efforts of all the carriers designed to protect the interests of the shipping public as well as the carriers is the object of the new organization. No meeting of the conference has been held and no date set for the first session.

Southern Pacific of Mexico Strike

The strike of all employees of the Southern Pacific of Mexico, which started on June 27, entered its third week on July 11 without definite indications of a settlement of the difficulties. The Federal Board of Arbitration and Conciliation of Mexico, after the inception of the strike, received a petition from the company asking that the strike be declared illegal, a proceeding which brought protests from the employee unions. Shortly thereafter the Federal Board issued a decision declaring the strike to be legal. About the same time the secretary of industry, commerce and labor made public a statement in which he denounced the striking workers as enemies of the country and said that their actions endangered the economic welfare of Mexico, particularly in this time of world depression.

Following this announcement the Southern Pacific decided to place the whole matter in controversy before the Federal Board of Arbitration and Conciliation and since July 1, hearings have been in progress before that body. The management wishes to reduce the salaries of all employees 10 per cent, pointing out that whereas the operations of the company resulted in a profit of 32,856 pesos in 1930, a loss of 1,084,677 had resulted in 1931 and during the 12 months ended May 31, 1932, there was a net loss of 1,594,232 pesos. The railway also contends that the rate of wages paid its employees is higher than that paid workers of other Mexican industries.

An incident in the strike negotiations has arisen before the Federal Board in which the strikers accuse the management of attempting to move rolling stock and locomotives located at Empalme, Sonora, to Nogales with American crews. The management on its part has accused the strikers of making use of the company's telegraph lines to transmit messages relating to actions of the company. In response to a request on the part of the director general of the post office, the strikers have agreed to permit the operation of several mail cars in the public interest. The director general has also made arrangements to transport mail by means of automobiles and motor coaches.

Railway Legislation Deferred

Most of the legislation in which the railways were interested, on which hearings were held by Congressional committees during the first session of the Seventy-Second Congress, has been deferred until the next session. The most important legislation affecting the railways which was passed during the session was the Reconstruction Finance Corporation act, under which government loans have been made to railways, banks, and other financial institutions, but this was intended not so much as a railway relief measure as one to avoid disaster among the holders of railway securities. Although in his message to Congress at the opening of the session and in later pronouncements President Hoover advocated "revision of the laws relating to transportation" and regulation of transportation in competition with the railways, nothing has so far come of his recommendations or of the recommendations made by the Interstate Commerce Commission in its annual report, to which he referred. A bill to repeal Section 15a of the interstate commerce act, including the recapture clause, was reported by the House committee on interstate and foreign commerce after lengthy hearings but was not brought out onto the floor of the House nor considered by the Senate committee. It will probably be superseded at another session by proposals for legislation of a broader scope. The House committee also reported out a holding company bill which was not considered. So far as transportation legislation is concerned the Senate committee on interstate commerce confined its activities largely to holding a series of hearings on the Couzens bill to provide for a system of bus regulation and truck registration, but the subject was dropped before revision of the bill had been completed in the light of the hearings. The House committee took no action on motor regulation because the House had once passed a bill on the subject and it was decided that there would be no use in proceeding further with the subject until after the Senate had shown some interest. Bills proposed by the railway labor organizations on the subject of pensions

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and full-crew regulations were also postponed.

Considerably increased expenditures for highway construction and river and harbor improvements by the federal government were authorized but no action was taken on the bills authorizing a $500,000,000 bond issue for waterways. The Wagner-Garner public works bill was vetoed by President Hoover and a substitute bill omitting the principal features to which he objected, that is, those providing for loans to individuals and private corporations, was passed by the Senate on Tuesday and by the House on Wednesday. This includes $120,000,000 for highway construction and $30,000,000 for river and harbor improvements in addition to the $54,000,000 for that purpose provided in the War Department appropriation bill.

Foreign

New Containers for Perishables on British Road

New types of insulated and ventilated containers for handling meat traffic will shortly be introduced by the Great Western of Great Britain. Of the 200 now under construction in Great Western shops, 125 will be of the insulated and 75 of the ventilated type.

The new containers, the announcement claims, will "provide the most efficient and hygienic form of transport for meat ever devised." In the insulated type the top and bottom as well as the walls will be insulated, while the ventilated type is described as "the outcome of months of intensive research."

Belgium Considers Co-ordination

Co-ordination of transportation facilities in which it is interested is being attempted by the Belgian government in order to cut down the drain on the treasury caused by railway deficits and losses on inland waterways operations, according to recent reports received by the U. S. Department of Commerce.

It is believed that the co-ordination will follow three courses:

1. Concentration under one management of the various means of transportation serving large cities.
2. Collaboration between rail and water transportation.
3. Collaboration between rail and highway transportation.

The Government passed a law in March which allows it to require the bus companies to pay a royalty to the railroad companies. This has not yet been required. One of the large rail companies is developing a business service, and it is believed that another one will adopt the same method of meeting competition, at least until electrification plans progress further.

In order to meet the competition of private automobiles in the transportation of passengers, the national railways are carrying on experiments to improve the speed, comfort and schedules of the trains. On one of the secondary lines, rail motor cars are replacing steam facilities. Due to the decrease in operating costs, the rail motor cars are competing successfully with the private bus services in that territory.

A study is also being made of electrification and its problems. On the basis of preliminary reports, the cost of electrifying the lines will save an amount equivalent to 10 per cent annually on the capital investment involved.

Fiftieth Anniversary of the St. Gothard Railway*

On June 1, 1882, the St. Gothard Railway was officially opened to general traffic, and the Swiss Federal Railroads have recently observed this jubilee with appropriate celebrations; for, although 50 years old, the St. Gothard Railway remains an outstanding marvel of engineering skill and a route of incalculable value to many nations.

Originally the St. Gothard pass was merely a narrow trail which gradually widened into a mule track. In the Nineteenth century a highway was built, but even on this road, in the era of horse-drawn vehicles, it took at least four days for the trip from Lucerne, Switzerland, to Milan, Italy. When the necessity for swifter and better transit between the North and the South became generally apparent, various projects for a railway through the Alps were advanced. The Lukmanier pass, between Disentis and Biasca, running virtually parallel with part of the St. Gothard road, was seriously considered, but in 1869 the Swiss government definitely decided in favor of the St. Gothard. This called for the boring of what was then the longest tunnel in the world, 9¼ miles. The project and the expenditure involved were tremendous. However, since Germany and Italy had just as great an interest in the construction of this direct route as Switzerland itself, a treaty between these three countries was signed in 1871, under which Germany ultimately contributed $6,000,000 to the cost, Switzerland $6,200,000, and Italy, $11,600,000.

In September, 1872, work was begun, and on February 29, 1880, after seven and one-half years of continuous, strenuous and dangerous work, the piercing of the tunnel was accomplished. The chief engineer, Louis Favre, of Geneva, was denied the satisfaction of seeing his work completed, however, for on July 19, 1879, he died suddenly of heart failure while on an inspection tour in the tunnel. Altogether, the St. Gothard Railway has 80 tunnels, with an aggregate length of 28½ miles, and 324 bridges of more than 32-ft. span. On May 27, 1882, the line was formally inaugurated and on June 1 it was opened for through traffic. Operated at first by steam, the St. Gothard line was immensely popular from the start; a second track had to be laid in the tunnel the following year, and gradually extended north and south.

The Swiss Federal Railroads, which took over the line on May 1, 1909, decided in August, 1913, that the advantages to be derived from electrification would, in view of the tremendous amount of water power available, justify the formidable expenditure involved. Accordingly, a credit of 38,500,000 Swiss francs (approximately $7,700,000) for the electrification of the mountain section from Erstfeld to Biasca was granted on November 15, 1913. In spite of the war, this electrification program was carried out and so rapidly extended that since 1924 the entire line from Basle, Switzerland, to Chiasso, on the border between Switzerland and Italy, together with the branch from Zurich, Switzerland, has been operated by electricity.

While one day and one night train in each direction were contemplated by the first timetable, in 1882, the present schedule includes six express passenger trains daily from Lucerne, Switzerland, to Milan, Italy, and seven similar trains in the opposite direction, all carrying sleeping and/or dining cars, as necessary. Freight moving through the tunnel has also shown an increase corresponding to that in passenger service. Gross traffic southbound in 1931 amounted to 2,297,662 tons, while freight moving north in the same year totaled 1,772,434 tons. In 1928, the record year to date, these figures had increased, respectively to 4,024,313 and 2,629,327 gross tons.

A new type of electric locomotive recently developed for use on the St. Gothard Line was briefly described on page 319 of the *Railway Age* of February 20. Capable of running 62 m.p.h., and of hauling 1,500-ton trains consisting of thirty-seven 40-ton cars on level track and 750-ton trains on grades of 2.7 per cent, this locomotive weighs 245 tons, is 111½ ft. long, and develops 8,500 horsepower.

* An abstract of an article prepared by M. D. Williams and published through the courtesy of the Swiss Federal Railroads.

South Australian Railways

Faced with a gross revenue decline of 21 per cent or $3,399,698 as compared with the previous year, the South Australian Railways, during the year ending June 30, 1931, effected savings in operating expenses of 23 per cent or $4,071,739 and thus held the 1930-31 deficit after interest charges to $8,210,430, a reduction of more than $500,000 as compared with the 1929-30 deficit of $8,747,630.

Financial results for the past five years are standardized in the following table:

	Operating Loss	Interest Charges	Deficit
	(pounds converted to dollars at par)		
1926-27	$8,511,864	$6,489,348	$15,001,212
1927-28	1,323,783*	6,193,111	4,869,328
1928-29	163,369	6,656,350	6,819,719
1929-30	1,934,242	6,813,388	8,747,630
1930-31	1,262,202	6,948,229	8,210,430

* Operating profit.

The 1930-31 gross revenues amounted to $12,664,722 while operating expenses were $13,926,924; respective 1929-30 figures were $16,064,421 and $17,998,663. Included in the operating expenses of each of these two years were depreciation and obsolescence charges and sinking fund contributions toward retirement of the national debt. These in 1930-31 totaled $1,705,055 so that there was a net revenue for the year after "ordinary

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working expenses" of approximately $442,800. In the previous year the net before depreciation, etc., was only $38,600.

Savings in expenses were made in all departments, the largest amount ($1,497,600) being the combined savings under the heading "Motive Power." This includes wages of enginemen, engine house expenses and fuel and locomotive supplies. Other substantial reductions were made in expenditures for maintenance of way and equipment and in transportation and traffic expenses. The report devotes considerable space to a resumé of the difficulties and delays encountered in effecting wage reductions and points out that it was not until late in the year that the full benefit of relief from lower labor costs began to be reflected in the accounts. Meanwhile the number of employees was reduced until on June 30, 1931, the average was 7,230 as compared with 8,487 on June 30, 1930.

During 1930-31 a Royal Commission conducted an investigation into the transport situation in South Australia. In accordance with the recommendations of this commission's first progress report a Transport Control Board has been created to supervise the co-ordination of rail and highway transport.

It was erroneously stated in the *Railway Age* of April 18, 1931, when the 1929-30 annual report of the South Australian Railways was reviewed, that the cumulative deficit after interest charges had by June 30, 1930, reached $154,385,287. This figure represents the total interest charges which have been assessed against the railways since their inception in 1853. In fiscal years prior to 1925-26, however, net revenues from operations, even though insufficient to cover all such charges, made substantial contributions toward interest. Thus from the time of the railways' inception until June 30, 1924, the aggregate of operating expenses and interest had become $349,259,800; aggregate gross revenues had reached a total of $343,597,100 so that the net deficit was then $5,662,700. This latter was wiped out during the fiscal year 1924-25 by a special contribution from the state treasury. Since 1924-25, however, the railways have earned an operating profit in only one year so that the net all time deficit as of June 30, 1930 (with the special contribution of 1924 eliminated) was $60,488,500 instead of the previously-published figure of $154,385,287.

Victorian Railways of Australia Report Record Deficit

Frank discussion of the past fiscal year's record deficit after interest charges, amounting to the equivalent of $7,200,600 (pounds converted at par), is the feature of the latest annual report of the Victorian Railways of Australia for the year ending June 30, 1931. This deficit, the report points out, "constitutes a problem of the gravest importance" since it is practically equal to the 1930 income tax receipts of the state and is equivalent to approximately $4 per capita.

Some little consolation is found in favorable comparisons with per capita deficits on government railways of other Australian states. The report adds, however, in this connection, that such comparisons "do not in any degree minimize the gravity of the situation, especially as it appears quite certain that until the state has rehabilitated its economic condition, nothing but a substantial loss can be expected from the railways system, with a capitalization built up in years when traffic was increasing and rendering it capable of handling a greatly increased volume of business."

Over-capitalization is listed as one of the basic causes of the deficit. The report states that accrued depreciation for which no provision was made in prior years now amounts to approximately $78,000,000, the interest upon which is a substantial factor in the railway accounts. Then comes a recommendation that this amount be written off since depreciation which accrued in past years "should not be a charge against the present railway user but should become a charge against the community." The investment in road and equipment as of June 30, 1931, was $363,346,900.

Not since the year ending June 30, 1925, when a net profit of $139,900 was reported, have these Victorian Railways earned a surplus after interest charges and with the exception of another small surplus ($94,200) for the year ending June 30, 1923, deficits have been reported for each fiscal year since 1913-14. A chart in the current report portrays the operating results since 1872-3; this shows that the only period in which the railways reported profits regularly was between 1905-06 and 1913-14 when a surplus after interest charges was reported in each of these nine fiscal years.

The previously-mentioned 1930-31 deficit of $7,200,600 includes a premium of $895,400 on exchange purchases in connection with interest payments in London; the 1929-30 deficit, with no premium on exchange involved, was $5,050,200. Gross revenues for 1930-31 were $49,137,700 a decrease of $9,730,900 as compared with the 1929-30 gross of $58,868,600; operating expenses were reduced by $8,905,000 or from a 1929-30 figure of $46,746,600 to a 1930-31 total of $37,841,600. Thus the past year's net revenue of $11,296,200 was but seven per cent under that of the previous year despite the decline of nearly 17 per cent in gross. The foregoing figures include street railway and highway operations; these, however, represent only a small proportion of the total since together in 1930-31 they involved gross revenues of only $397,000 and operating expenses of $366,200.

Included in the gross revenues of both years are certain credits, allowed by the state, for losses on specified lines which have been constructed, improved or operated upon direction from the government rather than for their traffic possibilities. These credits in 1930-31 amounted to $834,500 a decrease of $154,100 as compared with the previous year.

The report attributes the poor results, in the main, to the business depression but continues to argue that a substantial factor was the diversion of traffic to highway carriers. "There is certainly not sufficient traffic for two transport systems," it says, "and unless steps be taken to prevent the huge depredations of railway revenue..... it is our firm conviction that a grave situation will be created..... Indeed, we are convinced that no measures taken for the state's financial rehabilitation can be regarded as complete, nor can they be expected to be successful, which do not include the safeguarding of the huge railway investment against road competition." Provisions of a new Victorian law subjecting shippers of high grade freight over the highways to penalty rates on any low-grade commodities that they ship over the government railways, were outlined in the *Railway Age* of December 19, 1931, page 958.

Railways of India in 1930-31

The general economic depression, the civil disobedience movement and the growing competition of highway carriers combined during the fiscal year ending March 31, 1931, to reduce by $34,717,000, as compared with 1929-30, the gross revenues of all railways of India. Operating expenses were meanwhile reduced only by approximately $5,000,000 so that the 1930-31 net revenue from operations was $30,000,000 less than that of the previous year.

Comparative figures of gross revenues, operating expenses and net revenue from operations for the past four fiscal years are shown in the following table:

	Gross Revenues	Operating Expenses (000 omitted)	Net Revenues
1927-28	$431,656	$264,992	$166,664
1928-29	433,869	272,361	161,508
1929-30	423,697	275,524	148,173
1930-31	388,980	270,955	118,025

Note: Par value (36.5 cents) used in converting rupees to dollars.

Relationships of the central government of India to the railways are varied and by bringing up-to-date and reprinting an extract from the 1914-15 annual report this 1930-31 review explains the diversity. Of the important lines situated in British India or in which the government of India is interested, five (the North Western, the Eastern Bengal, the East Indian, the Great Indian Peninsula and the Burma Railways) are owned and operated by the central government; five (the Bombay, Baroda & Central India, the Madras & Southern Mahratta, the Assam-Bengal, the Bengal-Nagpur and the South Indian) are owned by the central government but operated by private companies enjoying a guarantee of interest from the state; two major roads (the Bengal & North-Western and the Rohilkund & Kumaon) and many minor lines are owned by private companies, some being operated by their owners and some by the central government or by private companies that operate state-owned systems; several minor lines are owned by district boards or enjoy a guarantee of interest from such boards.

The first two of the foregoing groups—government lines operated by the government and government lines operated by private companies—accounted for nearly 90 per cent of the gross revenues reported

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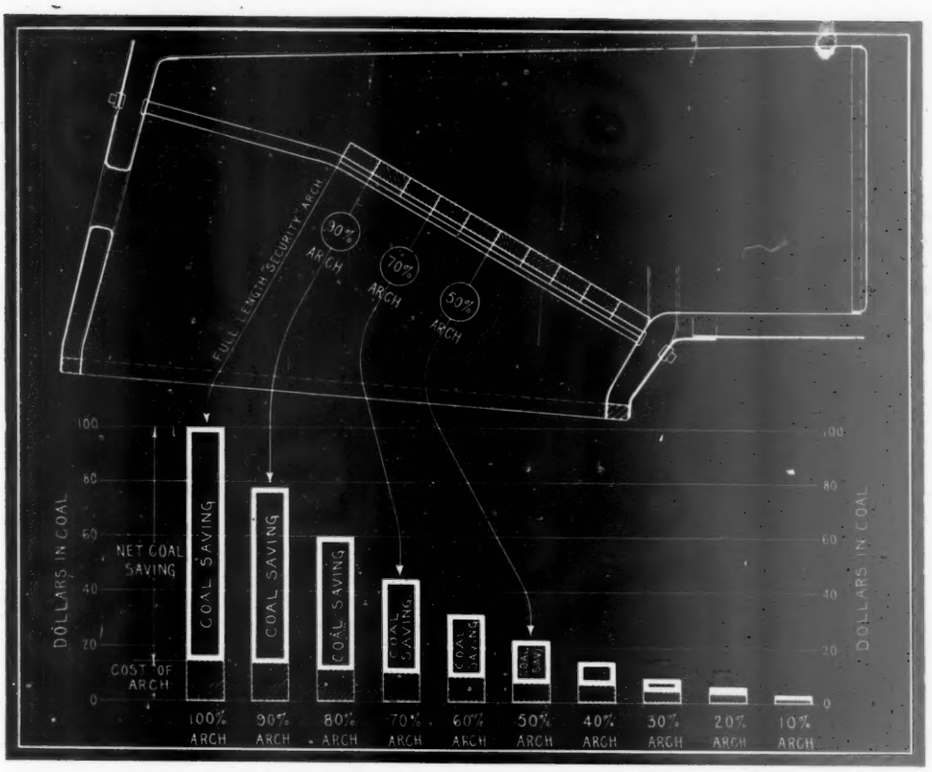

THE EFFECT OF ABBREVIATED ARCHES ON FUEL SAVING

Shorten the Arch

And You Spend More For Fuel

UNLESS locomotive Arches are of proper length, the forceful firing of modern stokers causes fuel to be used uneconomically.

Cutting out even a single course from the Arch seriously affects fuel economy.

Each dollar thus "saved" in Arch Brick means wasting ten dollars of fuel.

The fuel economy of the locomotive Arch was thoroughly established 20 years ago. In these days when every dollar of expense is under fire, equip the Arch to save every dollar of fuel money.

THERE'S MORE TO SECURITY ARCHES THAN JUST BRICK

HARBISON-WALKER REFRACTORIES CO.
Refractory Specialists

AMERICAN ARCH CO.
INCORPORATED
Locomotive Combustion Specialists

by all railways of India for 1930-31. The budget of these state-owned railways is separated from the general governmental budget and a fixed contribution from the railways to the general revenues of the state is a prior charge on net railway revenues after interest charges. This contribution is based on the capital investment and surplus profits with certain deductions allowed for interest charges and operating losses on unremunerative lines continued in operation for social or military purposes.

Financial statistics of the state-owned lines for 1930-31 are compared with the 1929-30 figures in the following table:

	1930-31	1929-30
	(000 omitted)	
Gross traffic receipts	$347,103	$374,866
Surplus profits from subsidized companies	743	2,142
Interest on depreciation and reserve funds	4,826	4,660
Other miscellaneous railway receipts	762	783
Total receipts	$353,434	$382,451
Operating expenses (excluding depreciation)	$198,521	$202,902
Depreciation	47,688	45,953
Surplus profits paid to companies	4,245	5,547
Land subsidy to companies	215	160
Interest	119,412	111,181
Miscellaneous railway expenditure	2,288	1,975
Total	$372,369	$367,718
Net—		
Loss	$18,935	.....
Profit	.....	$14,733
Contribution from railway to general revenues	20,935	22,337
Amount transferred from Railway Reserve Fund	39,870	7,604

Note: Par value (36.5 cents) used in converting rupees to dollars.

As the table shows the state-owned railways in 1930-31 reported a deficit after interest charges of $18,935,000 as compared with net earnings of $14,733,000 in 1929-30. Even in the last-mentioned fiscal period the net was less by $7,604,000 than the year's contribution to the government and thus the railway reserve fund has been reduced in 1929-30 and 1930-31 by a total of $47,474,000. As of March 31, 1931, there remained approximately $200,000,000 in this reserve fund.

* * *

Modern Type Electrically-Operated Crossing Gate on C. N. S. & M

Equipment and Supplies

LOCOMOTIVES

THE UNITED STATES NAVY DEPARTMENT is inquiring for one 30-ton gas-electric locomotive for service at Sunnyvale, Cal.

FREIGHT CARS

THE KANSAS CITY SOUTHERN is building 25 hopper bottom gondola cars of 70 tons' capacity, in its own shops.

IRON & STEEL

LONG ISLAND.—Orders for 1400 tons of reinforcing bars have been let by Foley Brothers, Inc., the general contractor now carrying out grade elimination work for the Long Island, at Valley Stream, N. Y. The orders were divided as follows: National Bridge Works, 700 tons; Igoe Brothers, 350 tons and Concrete Steel Company, 350 tons.

SIGNALING

TEXAS & NEW ORLEANS.—This company has petitioned the Interstate Commerce Commission for an order vacating and setting aside or suspending its orders of 1922 and 1924 in so far as they require it to maintain automatic train stop devices, between Rosenberg, Tex., and San Antonio, 170 miles. Asserting that no accident has been averted by use of the device the petition points out that the installation cost $347,419 and that its maintenance has cost $12,420 a year; also that "there have been a total of 1,662 undesired brake applications through faulty operation of the device, due to no fault of enginemen."

THE NEW YORK, CHICAGO & ST. LOUIS has given a contract to the Union Switch & Signal Company for the installation of electric interlocking and remote control with traffic signaling on the double track line between Maumee and Walbridge Park, Ohio. A type F interlocking will be installed at Gould involving a 35-lever Model 14 interlocking machine, 31 searchlight signals and 28 Model M-2 electric switch movements. The functions at Maumee and Walbridge Park will be remotely controlled from Gould and involve 19 searchlight signals and 12 Model M-22 dual control switch movements. Traffic locking will be provided between Maumee and Walbridge Park so as to permit reverse movements.

MISCELLANEOUS

Shopmen Return to Work

The necessity for getting cars and other equipment into shape for moving the grain and other crops that are now being harvested in the Middle West has led a number of roads to enlarge their shop forces. On July 6, the Missouri Pacific re-opened its locomotive and freight car shops at Sedalia, Mo., giving employment to about 600 men. This shop will operate five days a week. The Minneapolis & St. Louis, on July 11, resumed work at its shops with 300 men after two weeks of inactivity, while the Minneapolis, St. Paul & Sault Ste. Marie re-employed 186 shopmen on July 5. The Havelock, Neb., shops of the Chicago, Burlington & Quincy resumed operation on July 11 after about a week of idleness, with 400 employees, while on July 5, 300 other shopmen were returned to work. The machine shops of the Chesapeake & Ohio at Peru, Ind., have been reopened after having been closed since March 15. The Chicago & North Western on July 1 re-employed about 200 men in its car shops at various points on the system.

Supply Trade

The **Keystone Steel & Wire Company**, Peoria, Ill., has acquired the **Mattson Wire & Manufacturing Company,** Joliet, Ill. The acquired company will continue to operate under its own name.

Dr. Webster N. Jones, general superintendent of the processing division of the B. F. Goodrich Company, Akron, Ohio, has resigned effective August 1, to become director of engineering of Carnegie Institute of Technology, Pittsburgh, Pa.

The Nordberg Manufacturing Company, Milwaukee, Wis., has moved its New York office from 51 East Forty-second street to the Lincoln building, 60 East Forty-second street, and has moved its Los Angeles, Cal., office from 1462 Stanley avenue to the Subway Terminal building at 417 South Hill street.

The Peerless Equipment Company has recently been organized for the purpose of engaging in the general railway supply business. **Floyd K. Mays** has been elected president and **A. A. Helwig,** vice-president, with offices at 230 Park avenue, New York, and 310 S. Michigan boulevard, Chicago. Among other specialties and devices to be handled, the new company will market the various types of Peerless draft gears heretofore owned by the American Steel Foundries.

William E. Millhouse, general manager of the **Burden Iron Company,** Troy, N. Y., has been elected executive vice-president. The office of president, made vacant by the recent death of James A. Burden, will not be filled for at last a year. Mr. Millhouse, who was born in London, England, entered the employ of the Burden Iron Company in February, 1876, starting as a feeder on a swaging machine. In 1907 he was appointed paymaster at the plant and two years later was elected assistant secretary, becoming assistant manager in

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1910. Eight years later he was promoted to general manager.

Irving H. Jones, western sales manager of the Molybdenum Corporation of America has been appointed manager of railroad sales of the **Timken Steel & Tube Company,** Canton, Ohio. Mr. Jones held the position of western sales manager of the Molybdenum Corporation for several years, previous to which time he was for ten years manager of railroad sales of the Central Alloy Steel Corporation. He has been connected with the railway supply industry and active in association work for over 20 years, playing an important part in the creation of the Allied Railway Supply Association, of which he is now president.

Irving H. Jones

E. E. Russell Trotman, associate editor of the Engineering News-Record, specializing in railroad matters, who is known to many railroad engineers for his book Railway Track and Maintenance and for his other extensive writings dealing with the theory and practice of railroad engineering, **retired on** July 1. Mr. Trotman had been connected with the editorial staff of the Engineering News-Record and one of its predecessors, the Engineering News, for 46 years, of which the last 35 were in the Chicago office. He was born at Bristol, England, and studied engineering under Edward Wilson, consulting engineer on railway work in London. He came to this country in 1884 and served for two years with the Long Island Railroad before entering upon his journalistic career as a member of the staff of the Engineering News. In 1897, Mr. Trotman was appointed western editor, with headquarters at Chicago, and continued in this capacity after the consolidation of the Engineering News and the Engineering Record in 1917 to form the Engineering News-Record. Thereafter, he was connected with the Chicago office continuously until his retirement. As a special agent for the United States Department of Agriculture, Mr. Trotman in 1894 prepared detailed reports on metal and wood ties and on the preservation of wood ties. In 1897 he published the first edition of Railway Track and Track Work of which the name was changed to Railway Track and Maintenance with the 1926 edition. Mr. Trotman is a charter member of the American Railway Engineering Association and a member of a number of other railway and technical societies.

Construction

CINCINNATI UNION TERMINAL.—A contract has been awarded to the Ferro Concrete Construction Company, Cincinnati, Ohio, for the construction of the superstructure of a power house to serve the facilities of the terminal company at this point, at an estimated cost of $115,000. The Ogle Construction Company, Chicago, has been awarded a contract for the installation of coal and ash handling facilities at a cost of about $48,000.

LITCHFIELD & MADISON.—This company has been authorized by the Interstate Commerce Commission to construct an extension from a point on its mine spur, in the town of Williamson, Ill., southeasterly to a connection with the Cleveland, Cincinnati, Chicago & St. Louis in Livingston, Ill., a distance of 1.53 miles. The estimated cost of the work is $31,023.

MISSOURI-KANSAS-TEXAS.—A contract has been awarded to C. I. Stafford & Sons and D. R. Campbell, Springfield, Mo., for the construction of extensive stockyard facilities at Parsons, Kan. The plans provide for the construction of a frame hog shed, 40 ft. by 376 ft., over a double row of 8-ft. by 16-ft. pens, having an 8-ft. alley between. This structure will have a concrete floor, concrete water troughs, a concrete unloading platform, and will be provided with electric lights and a Fairbanks scale. A double row of 16-ft. by 16-ft. open cattle pens, having overall outside dimensions of 40 ft. by 280 ft., will also be constructed.

NATIONAL OF MEXICO.—Company forces have begun the construction of a new passenger station at Toluca, Mex., to replace the structure which was recently destroyed by fire.

NEW YORK CENTRAL.—During the month of June two contracts for the erection of sections of the superstructure of the viaduct being built as part of its West Side improvement project in New York City were awarded by this company. The superstructure of that part of the viaduct between West Thirtieth and West Thirty-fifth streets will be built by the George A. Fuller Company, New York, while James Stewart & Company, Inc., also of New York, received the contract for that portion of the viaduct superstructure between Horatio and Gansevoort streets.

PENNSYLVANIA.—As part of its share of a joint track elevation and grade separation project in Norristown, Pa., this railroad has awarded to the James McGraw Company, Philadelphia, Pa., a contract amounting to $45,000, and covering the construction of an extension to Saw Mill Run culvert, the placing of the substructure for an undergrade bridge at DeKalb street, and the construction of a retaining wall, preparatory to track elevation, from Mill street to DeKalb street. The entire project, in which the state, county and city are also interested, involves elimination of several grade crossings and the construction of new buildings by the Pennsylvania and the Reading, which has virtually completed its portion of the grade separation work. An additional contract, for the construction, at a cost of about $140,000, of retail coal pockets and equipment on Pennsylvania Railroad property known as Bolton yard, at Oliver street and Maryland avenue, Baltimore, Md., has been awarded by the Pennsylvania to the M. A. Long Company, Baltimore.

PENNSYLVANIA.—Handling of l. c. l. freight in portable containers has grown to such an extent on the Pennsylvania that authorization has just been given for the construction of a new and larger station in the railroad's Enola freight yards near Harrisburg, Pa., to be devoted exclusively to this service. The cost of this new improvement will be approximately $130,000. In order to expedite the movement of containers between the east and the west, they are brought to Harrisburg, where those consigned to one destination are assembled into solid cars of either five or eight containers. These cars are then switched to regularly scheduled high-speed freight trains and rushed through to destination. The new container handling station will take the place of the one now in operation in the Harrisburg yards. It will have two overhead cranes for lifting the containers from one car to another. These movable cranes will be operated over a spread of seven tracks, each 900 ft. in length. The station will have a capacity for handling from 1,200 to 1,500 containers a day, and will be conveniently located between the eastbound and the westbound freight yards.

PENNSYLVANIA.—Two contracts have been awarded by this company for work in connection with a project in the vicinity of Cincinnati, Ohio. The R. T. Belding Company, Chicago, has been given a contract for the construction of a 3,200-ft. single-track wye connection, to cost approximately $47,000, at Red Bank, Ohio, between the Little Miami Railroad (now the Cincinnati division of the P.R.R.) and the Pittsburgh, Cincinnati, Chicago & St. Louis Railroad (now Richmond division, P. R. R.). A contract amounting to $130,000 for the construction of a single-track connection about 6,000 ft. long, from the Pennsylvania (Richmond branch) to the main line of the Baltimore & Ohio at East Norwood, Ohio, has been awarded to the John F. Casey Company, Pittsburgh, Pa. This latter contract also includes the extension by about 3,000 ft. of a passing siding at Norwood Heights and the necessary grading for a suburban passenger station at Harris avenue. The trackage involved in the

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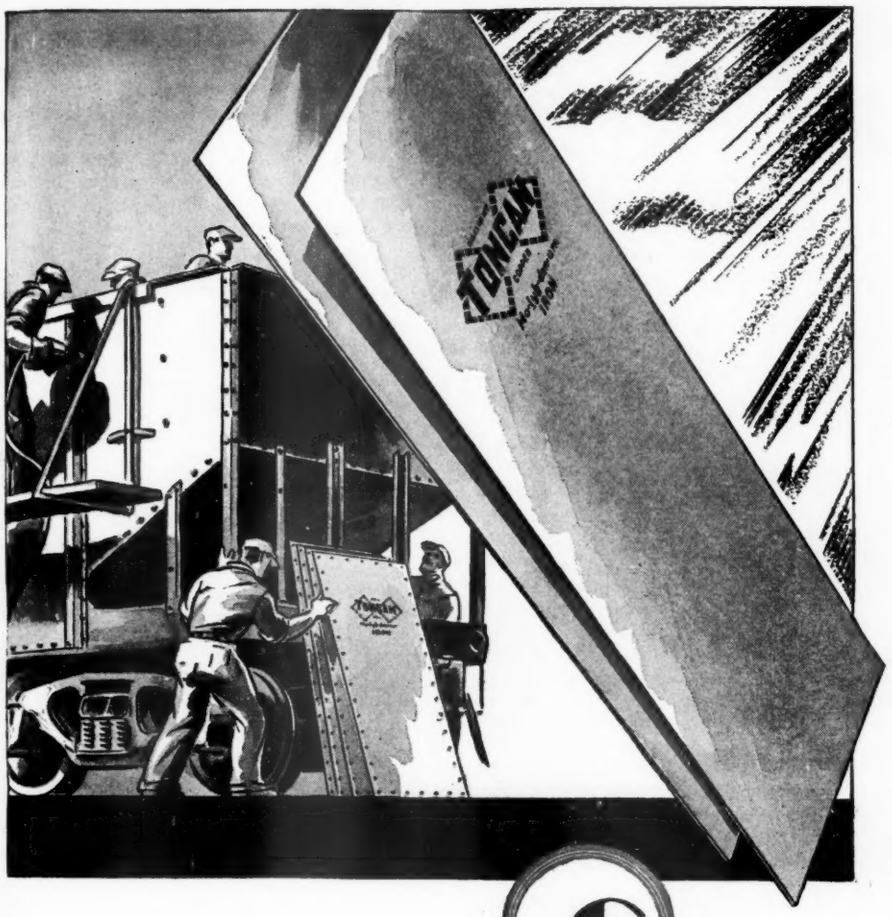

GIVE EQUIPMENT TONCAN IRON PROTECTION AS IT GOES THRU THE SHOP

Even if equipment was built years ago it is not too late now to begin its protection against rust and corrosion. « Many roads, as cars come in for repair, are using Toncan Iron sheets to prepare them to make a better fight against the onslaughts of corrosion. « Many miles of new cars built in recent years already have the greater protection against rust and corrosion that comes from Toncan Iron. Their performance demonstrates the increased life that accompanies Toncan Iron. « Toncan Iron has all the corrosion resistance of refined iron further fortified by alloying with copper and molybdenum. The resulting alloy resists corrosion better than any car material you have ever used. « Use it for all repair work and reduce future maintenance expense.

Toncan Iron Boiler Tubes, Pipe, Plates, Culverts, Rivets, Staybolts, Tender Plates and Firebox Sheets • Sheets and Strip for special railroad purposes • Agathon Alloy Steels for Locomotive Parts • Agathon Engine Bolt Steel • Nitralloy • Agathon Iron for pins and bushings • Agathon Staybolt Iron • Climax Steel Staybolts • Upson Bolts and Nuts • Track Material, Maney Guard Rail Assemblies • Enduro Stainless Steel for dining car equipment, for refrigeration cars and for firebox sheets • Agathon Nickel Forging Steel (20-27 Carbon)

REG. U.S. PAT. OFF.
TONCAN
COPPER
Mo-lyb-den-um
IRON

The Birdsboro Steel Foundry & Machine Company of Birdsboro, Penna., has manufactured and is prepared to supply under license, Toncan Copper Molybdenum Iron castings for locomotives.

REPUBLIC STEEL CORPORATION

GENERAL OFFICES: YOUNGSTOWN, OHIO

combined Belding and Casey contracts will enable Pennsylvania trains from both east and west to gain access to the new Cincinnati Union Terminal over the tracks of the Baltimore & Ohio. Plans for the construction of a suburban passenger station at Norwood are now under consideration, and it is expected that the contract for this portion of the project will be let by the Pennsylvania early in the fall.

PUBLIC SERVICE COMMISSION OF NEW YORK.—The New York Public Service Commission will consider for elimination during 1932 the Mill, Eagle and Ontario street crossings of the New York Central, all in Phelps, N. Y., and all to be considered for removal in connection with the elimination of the nearby Main street crossing in the same town. The commission has also ordered the reconstruction of the highway bridge carrying Jerusalem road, in the village of Westbury, town of North Hempstead, N. Y., over the tracks of the Long Island; but has closed proceedings for elimination of the Locust avenue crossing of the same railroad just south of Glen Head station, Oyster Bay, N. Y., and of the Interchange and Dutchmans crossings of the Boston & Maine and Delaware & Hudson northeast of Scotia, Glendale, N. Y. The commission has approved a bid submitted by M. DeGroot, Fort Edwards, N. Y., for elimination of the Gansevoort-Butlers road and Fullerton street crossings of the D. & H. in Northumberland, N. Y., and has further approved specifications and cost estimates for the elimination of the Paterson crossing of the Erie, Erwin, N. Y. Some of the work on this latter crossing will be done by railroad company forces. A revised estimate of cost for the elimination of the Back street crossiug of the Baltimore & Ohio (Buffalo, Rochester & Pittsburgh) in Pavilion, N. Y., and descriptions and costs of land to be acquired in connection with the elimination of the Condensary crossing of the Pennsylvania in Fillmore, N. Y., have also been approved by the commission; which has authorized the Erie to employ company forces on certain work required by the elimination of its Oquaga crossing, three miles west of Deposit station, Sanford, N. Y. Similar permission for the employment of company forces on certain work in connection with the elimination of a grade crossing of the Erie and the Lehigh Valley located about 2.33 miles northeast of Tioga Center station, Tioga, N. Y., has been given by the commission to the Lehigh Valley.

VIRGINIAN (Virginian & Western).—This road has awarded to Boxley Brothers Company, Inc., Orange, Va., a contract for the construction to subgrade, exclusive of the superstructures for steel bridges, of 4.72 miles of the new Guyandot River line of the Virginian & Western, a Virginian subsidiary. The section of the line covered by the present contract, which amounts to approximately $350,000, including a yard at Gilbert, W. Va., lies in Mingo county, W. Va., and extends from M. P. 39.38 (Guyandot River line) to Gilbert. It will, therefore, complete a 44-mile connection, via the Guyandot River line of the Virginian & Western, between the Virginian at Elmore, W. Va., and the Chesapeake & Ohio and the Norfolk & Western at Gilbert.

Financial

ATLANTIC COAST LINE.—*Final Valuation.*—The final value for rate-making purposes of the property owned and used for common-carrier purposes as of June 30, 1917, was placed at $162,150,000 in a final valuation report as of that date issued by the Interstate Commerce Commission. The value of property used but not owned was placed at $3,343,295. The investment in road and equipment, including land, was stated in the books as $182,233,025. With. readjustments required by the accounting examination, the report says, this would be decreased to $160,438,637. The outstanding capitalization as of valuation date was $212,095,335.

CAROLINA & NORTHEASTERN RAILWAY. —*Operation.*—The Interstate Commerce Commission has authorized this company to acquire and operate the 8-mile line between Gumberry, N. C., and Jackson formerly operated by the Carolina & Northeastern Railroad.

CHICAGO, ROCK ISLAND & PACIFIC.—*Unification.*—This company's application to the Interstate Commerce Commission for authority to effect a unification of its system has been assigned for hearing at Dallas, Tex., on July 25 before Examiner H. C. Davis.

COPPER RANGE.—*R.F.C. Loan.*—This company has applied for a loan of $114,000 from the Reconstruction Finance Corporation to pay interest on its funded debt.

EAST KENTUCKY SOUTHERN.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority to abandon its entire line from Grayson, Ky., to Webbville.

MINNEAPOLIS & RAINY RIVER.—*Abandonment.*—The Interstate Commerce Commerce Commission has authorized this company to abandon as to interstate commerce its line of railroad extending from Deer River, Minn., to Craig, 43 miles, together with a 20-mile branch.

NEW YORK CENTRAL.—*Abandonment.* —This company, the Michigan Central, and the St. Clair & Western have applied to the Interstate Commerce Commission for authority to abandon the line of the latter from St. Clair, Mich., to Richmond, 14.88 miles.

PENNSYLVANIA.—*Securities.*—The Interstate Commerce Commission has authorized the New York Bay Railroad to issue $3,811,250 of stock and $11,706,000 of five per cent first mortgage bonds to be delivered to the Pennsylvania, which is authorized as lessee to guarantee them. The Delaware Railroad has likewise been authorized to issue $750,000 of five per cent bonds to be delivered to the Pennsylvania, which, as lessee, will guarantee them. The Pennsylvania has been authorized to lease the Belvidere & Delaware Railroad, extending from Trenton, N. J., to Manunka Chunk, with branches, a total of 82.5 miles.

ST. LOUIS-SAN FRANCISCO.—*Readjustment of Capital.*—This company is calling upon all holders of its securities to assent promptly to a plan for the readjustment of its capital structure. Depositors are named for all issues and holders are assured that "prompt and practically unanimous assent to the plan is essential to avoid receivership."

ST. LOUIS-SAN FRANCISCO.—*Deposit of Bonds.*—A formal call has been issued for the deposit of the bonds of this company by Edward N. Brown, chairman of the board, under the reorganization plan which was recently presented to the Interstate Commerce Commission. The call was issued jointly by the readjustment managers and the committees representing security holders. It is stated in the notice that prompt and practically unanimous assent to the plan by bondholders is necessary to avert receivership since it will not be carried out in such a way as to permit a minority of the bond holders to secure an improved position by failing to agree to it.

SOUTHERN.—*Abandonment.*—The Interstate Commerce Commission has authorized this company to abandon a branch extending from Moscow, Tenn., to Somerville, 13 miles.

SOUTHERN PACIFIC.—*Bonds.*—The Interstate Commerce Commission has authorized this company to assume liability as guarantor for $21,948,000 of first and refunding mortgage bonds of the Arizona Eastern.

Dividends Declared

Philadelphia & Trenton.—2½ per cent, quarterly, payable July 10 to holders of record July 1.

Virginian.—Preferred, $1.50, quarterly, payable August 1 to holders of record July 16.

Average Prices of Stocks and of Bonds

	July 12	Last week	Last year
Average price of 20 representative railway stocks..	12.25	11.78	69.01
Average price of 20 representative railway bonds..	48.70	48.93	91.58

THREE MEN were killed and three others were seriously injured when a gasoline rail-motor car, northbound on the Central Vermont, collided head-on with a southbound freight train on a curve just north of Franklin, Conn., about half way between Norwich and Willimantic, on July 6. All the victims of the accident were in the rail car, which was carried some distance on the pilot of the freight locomotive, while all those killed and one of the three injured were railway employees.

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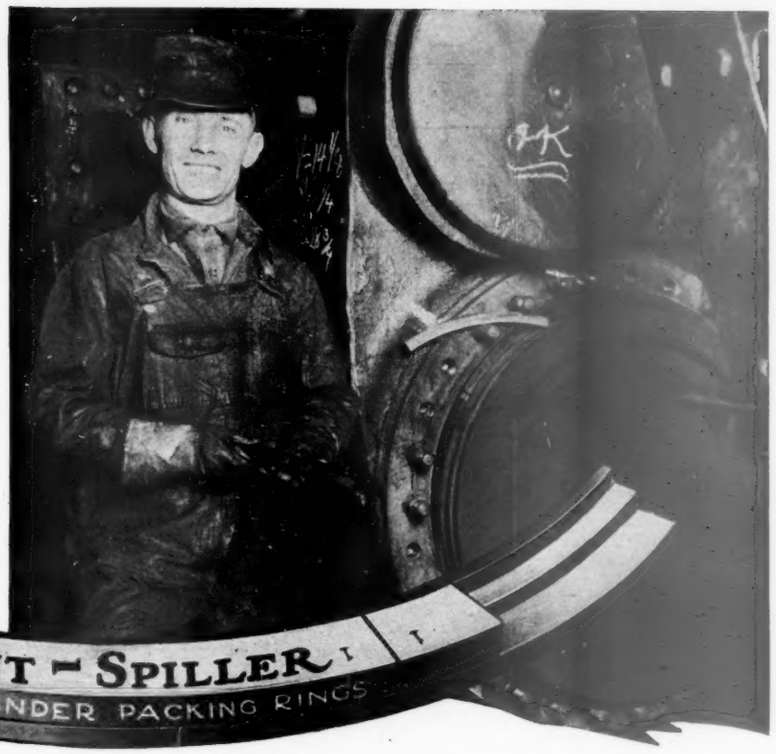
Have You Tried Duplex Packing?



THE well-balanced design and exceptional wear resisting properties of HUNT-SPILLER *Duplex* Sectional Packing have helped many railroads to overcome the problems which have developed in the cylinders of modern power.

Mechanical department officers are highly pleased with the performance of this packing. Records show unusual mileage between renewals. The scientifically heat-treated springs which support the sections are not affected by high superheat temperatures.

Both of the over-lapping sections are of equal depth thus assuring maximum wear without breakage.

Are you having trouble with cylinder packing? Why not try HUNT-SPILLER *Duplex* Sectional Packing?

HUNT-SPILLER MFG. CORPORATION
J. G. Platt, Pres. & Gen. Mgr. V. W. Ellet, Vice-President

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383 Dorchester Ave. **South Boston, 27, Mass.**
Canadian Representative: Joseph Robb & Co., Ltd., 997 Aqueduct St., Montreal, P. Q.
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HSGI
Reg. U. S. Trade Mark
Cylinder Bushings
Cylinder Packing Rings
Pistons or Piston Bull Rings
Valve Bushings
Valve Packing Rings
Valve Bull Rings
Crosshead Shoes
Hub Liners
Shoes and Wedges
Floating Rod Bushings
Parts Finished for Application
Dunbar Sectional Type Packing
Duplex Sectional Type Packing
(Duplex Springs for Above Sectional Packing)
Cylinder Snap Rings
Valve Rings All Shapes

HUNT-SPILLER GUN IRON

Air Furnace

Railway Officers

EXECUTIVE

C. P. Couch, whose election as president of the Louisiana & Arkansas was noted in the *Railway Age* of June 25, has spent most of his business career in the public utility field. In 1906, as a youth, Mr. Couch became a fireman on the Louisiana & North West, but after a short time he resigned to enter the telephone business with his brother, in which he engaged in various capacities until 1911. At that time, Mr. Couch and his business associates entered upon an active program of electric power development, and had a large part in developing the inter-connected power systems of the present Louisiana, Arkansas and Mississippi power and light companies. In 1923, he became vice-president and general manager of the Mississippi Power & Light Company, and during the latter part of 1927 he became vice-president and general manager of the Southern Light & Utility Company, with headquarters at Dallas, Tex. Mr. Couch's return to active railway service in March, 1930, was marked by his election as executive vice-president of the Louisiana & Arkansas, and the Louisiana, Arkansas & Texas, a subsidiary. Later he became president of the latter road. Mr. Couch was holding these positions at the time of his recent election as president of both companies, with headquarters at Shreveport, La. He retains his connection with the utility business as a director on the boards of a number of companies and is also connected in a similar manner with the bank and insurance business.

C. P. Couch

OPERATING

E. A. Stibolt has been appointed assistant general manager of the Canton & Carthage, with headquarters at Hammond, La., to succeed **Robert Stainback,** who has been appointed comptroller.

J. F. Earl, division engineer of the Portage division of the Canadian Pacific, with headquarters at Winnipeg, Man., has been promoted to assistant superintendent of part of the Moose Jaw division, with headquarters at Moose Jaw, Sask., to succeed **J. W. Wilkes,** who has been transferred to the Calgary division, with headquarters at Calgary, Sask., where he replaces **W. Manson.** Mr. Manson's promotion to superintendent at Nelson, B. C., was noted in the *Railway Age* of July 9.

TRAFFIC

Joseph Walker, traveling freight agent for the Chicago & Illinois Midland, with headquarters at Peoria, Ill., has been promoted to general agent at that point, to succeed **R. A. Wertman,** who has resigned.

A. K. Frye, general livestock agent for the Southern Pacific, Pacific Lines, with headquarters at San Francisco, Cal., retired from active service on July 1. The position of general livestock agent has been discontinued.

A. J. Stacy, commercial agent for the New York, Chicago & St. Louis, with headquarters at Pittsburgh, Pa., has been promoted to general agent at Davenport, Iowa, where he replaces **R. A. Webster,** who has retired.

L. G. Hoff, traffic manager of the Southern Pacific of Mexico, with headquarters at Guadalajara, Jalisco, Mex., has been appointed to the newly-created position of general traffic manager, with headquarters at the same point.

W. D. Grubb, assistant general freight agent of the Louisiana, Arkansas & Texas, with headquarters at Dallas, Tex., has been appointed general freight and passenger agent, with headquarters at Dallas and Greenville, Tex., succeeding **R. R. Farmer.**

ENGINEERING AND SIGNALING

E. J. Bayer, division engineer of the Chicago division of the Cleveland Cincinnati, Chicago & St. Louis, with headquarters at Indianapolis, Ind., has been transferred to the Cairo division, with headquarters at Danville, Ill.

H. R. Clarke, general inspector of permanent way of the Chicago, Burlington & Quincy, has been appointed to the newly-created position of engineer maintenance of way, with headquarters as before at Chicago, and the position of general inspector of permanent way has been abolished.

W. O. Houston, division engineer of the Middle division of the Michigan Central, with headquarters at Jackson, Mich., has had his jurisdiction extended over the West division, and **J. D. Elder,** division engineer of the latter division, with headquarters at Niles, Mich., has been appointed roadmaster, with the same headquarters.

MECHANICAL

G. P. Trachta, master mechanic of the Galesburg division of the Chicago, Burlington & Quincy, with headquarters at Galesburg, Ill., has had his jurisdiction extended to include the Beardstown division, and **W. E. Corya,** master mechanic of the latter division, with headquarters at Beardstown, Ill., has been appointed to the newly created position of assistant master mechanic, with headquarters at Centralia, Ill.

George E. Smart, chief of car equipment of the Canadian National, who retired at the end of June, as announced in the *Railway Age* of July 2, page 34, was born in Edinburgh, Scotland, on December 23, 1873. Mr. Smart began railroad service in 1892, in the car department of the Grand Trunk. He was connected with the Canadian Pacific from 1904 to 1913, holding successively the positions of general inspector, heating and lighting; general car inspector, and divisional car foreman, Eastern lines. In 1913, he became master car builder of the Canadian Government Railways (now C.N.R.), at Moncton, N. B., and in 1918, he was removed to Toronto, Ont., as general master car builder of the Canadian National. In 1920, Mr. Smart's jurisdiction was extended to include the Grand Trunk Pacific lines and later in the same year he became mechanical assistant to the operating vice-president. In 1923, he was appointed chief of car equipment, with headquarters at Montreal, which position he held until his retirement. Mr. Smart served as vice-chairman of the Mechanical Division, American Railway Association from 1926 to 1927, and as chairman from 1928 to 1930.

George E. Smart

OBITUARY

Adonis G. Davis, secretary and auditor of the Pittsburgh, Allegheny & McKee's Rocks, with headquarters at McKee's Rocks, Pa., died on July 8, at his home in Avalon, Pa.